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Essays on the Economics of Discrimination

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Emily P. Hoffman
Kalamazoo, Michigan
August 1991

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Introduction

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While the implementation of affirmative action by means of legislation and judicial actions is currently much in the news, it is not a new issue. In 1941, President Roosevelt instituted affirmative action by means of Executive Order 8802. The exigencies of the war effort opened new opportunities for blacks and women in the labor market. Albeit with setbacks, the general economic expansion of the postwar years allowed some of these gains to be retained.

More explicit attempts to achieve equality of treatment were contained in the antidiscrimination laws of the 1960s (the Equal Pay Act of 1963 and Title VII of the Civil Rights Act of 1964) and the affirmative action regulations of the 1970s (Executive Order 11246 in 1974). Even with all these legal initiatives, the economic status of women and minorities is far below parity with that of white males.

Comparing full-time, year-round workers in 1989, women earned only $.66 for every $1.00 men earned, and the median family income of blacks was only $.56 for every $1.00 of income for white families. Some part (but not all) of these differences can be attributed to discrimination, which is unequal treatment based on gender, race, age, national origin, religion, or similar characteristics irrelevant to the ability to perform on a job. While always unethical, discrimination is now definitely illegal, even though it has yet to be eliminated.

Determining what part of the income gap between males and females or blacks and whites is due to discrimination and what part is due to productivity differences is a challenging exercise. Economists measure discrimination using a residual methodology; any wage gap not due to legitimate productivity-related variables such as education, experience, and occupation is attributed to discrimination. It is difficult for economists to both reach consensus on the legitimate determinants of wage differentials and be able to measure them. For example, quality of education is a legitimate determinant of wage differentials for which data are not typically available; therefore, one cannot distinguish what part of the wage gap is due to discrimination and what part is due to an omitted variable such as quality of education.

Economic discrimination is unequal treatment based on criteria irrelevant to the activity involved. Labor market discrimination is unequal treatment in the labor market based on irrelevant criteria; it occurs in the form of wage discrimination or nonwage discrimination in such areas as hiring, retention, training, and promotion. Prelabor market discrimination is unequal treatment based on irrelevant criteria in such areas as type and amount of education and training and career aspirations.

Much of the research concerning labor market discrimination focuses on wage discrimination. An inconsistency arises in reconciling the theory of the firm with the existence of wage discrimination. Economic theory assumes that perfectly competitive firms maximize profit; in the long run, the firms produce at the minimum of their long-run average cost curve. The firms that survive in the long run all have the same minimum average cost and the most efficient technology, which means none of them will be practicing wage discrimination, since it is inconsistent with minimum cost. Wage discrimination raises labor cost because the favored group is overpaid relative to the discriminated-against group. Perfectly competitive firms in the long run are predicted to employ only the underpaid discriminated-against group, since this results in the least-cost method of production. Since the test of a good theory is whether its predictions are consistent with reality, and since that is not the case here, I conclude that the theory of the profit-maximizing, perfectly competitive firm is not appropriate for explaining discrimination. Some others at this point conclude that there is no wage discrimination

Economic theorists who observe discrimination next turn to models of imperfect competition to find a theory consistent with wage discrimination. Imperfect competition in either the labor market or the product market has been proposed as being consistent with discrimination. If the males and females or blacks and whites do not compete with each other for jobs due to hiring discrimination, then a reduced labor supply for white and male jobs results in higher wages for whites and males. If the product market exhibits imperfect competition, firms can survive and prosper without achieving minimum cost, unlike the perfectly competitive firm.

Economic theory suggests that there will be discrimination if the employer perceives or expects the benefits of discriminating to exceed the costs of discriminating. Traditionally, especially before the Equal Pay Act of 1963, men were paid more than women, with the justification that men had to support a family and women did not. While society today has accepted that pay is to be based on worker productivity rather than gender or marital status, there may still be a residual of these earlier beliefs.

Hiring, retention, training, and promotion decisions, especially for managerial or professional workers, involve compatibility and personal relationships with co-workers and supervisors. The candidates for these positions are unique (heterogeneous), and information about their talents, skills, and abilities is costly and imperfect. The employment relationship is anticipated to be long term. Women and minority males find there is discrimination in promotions, called the "glass ceiling." Promotion discrimination may be due to the employer's desire to lessen uncertainty concerning the candidate's abilities; majority males may prefer to hire and promote other majority males (of the same socioeconomic class) because they believe they have more information about them, since they are more likely to "think alike."

This collection of essays expands on the presentations of seven distinguished economists at the 26th annual economics lecture series at Western Michigan University. Topics addressed in the papers include: the theory and evidence of labor market discrimination; the impact of laws and policies concerning discrimination; the treatment of children compared to the elderly; discrimination within the family; the economic underclass; and the treatment of minority members of our society.

In his paper, "Discrimination in Labor Markets," Edward P. Lazear presents an overview of the current antidiscrimination laws. Important jargon terms, such as "protected category," "disparate treatment," and ''disparate impact'' are defined by means of examples. Because married women can benefit (through their husbands) from discrimination in favor of males, and everyone can potentially benefit from discrimination in favor of youth (when they are young), Lazear argues that there is a hierarchy of discrimination, with racial discrimination being worse then either sex or age discrimination.

Lazear is quite optimistic about improvement in the status of women in the labor force, but is pessimistic concerning the status of a large segment of the black population. He argues that a shift in the industrial structure is changing the composition of the available jobs. There are more white-collar managerial jobs, and many more pink-collar clerical and service jobs, all requiring more formal education, but fewer relatively well-paying, unskilled, blue-collar production jobs. These changes in the structure of the job market have been instrumental in improving the economic status of women, but have been detrimental to the improvement of the economic status of blacks lacking education and skills.

For greatest effectiveness in reducing the adverse effects of discrimination, Lazear argues that enforcement efforts should focus first on hiring, second on promotion, and last on wages. He argues in favor of better enforcement of Title VII of the Civil Rights Act of 1964, specifically fair hiring, rather than comparable worth legislation (which he believes to be inherently arbitrary), as the way to raise female and black wages relative to those of white males.

In ''Discrimination Within the Family: The Treatment of Daughters and Sons,'' Paul J. Taubman discusses whether parents who treat their sons and daughters differently are practicing discrimination. He starts with a historical overview of the differential between male and female wages, citing numerous studies of differences in education and work experience of male and female youth.

Taubman then develops a formal model of parents' utility function, in which discrimination exists if parents care unequally for their children or weigh the importance of each child's future earnings stream unequally. While parental nondiscrimination means that the parents care equally about each child, this does not necessarily require investing equal resources of the parents' time and/or funds in each child. Taubman ultimately concludes that the evidence available indicates that parents in the U.S. do not discriminate among their children by gender.

Barbara L. Wolfe investigates whether there is unequal treatment in federal government income-transfer programs according to the age of the recipient. In "The Deteriorating Economic Circumstances of Children," she finds that these policies discriminate against children and in favor of the elderly—the evidence being that while the poverty rate of the elderly has fallen, that of children has risen. Children are one-third of those with no health insurance, while nearly all the elderly receive Medicare and/or Medicaid.

While 80 percent of the elderly are removed from poverty by cash transfers (Social Security and Supplemental Security Income), only 23 percent of single-parent families with children are removed from poverty by cash transfers (principally Aid to Families with Dependent Children). Wolfe contrasts the percent of the elderly poor who receive Supplemental Security Income, and how those amounts compare to the poverty line, with the percent of poor children benefiting from Aid to Families with Dependent Children and their status relative to the poverty line.

Wolfe discusses public spending on education, which is our society's principal investment in children. She presents evidence that schools treat children from low-income and single-parent households unequally compared to children from middle-class families. Thus, the means that may facilitate their escaping from poverty are denied to those who are in the greatest need. As a remedy, Wolfe proposes national health insurance for all children, and a method of financing higher education or apprenticeships for all children.

In his paper, "Underclass and Overclass: Race, Class, and Economic Inequality in the Managerial Age," William A. Darity asserts that an understanding of the nature of the overclass is a prerequisite to an understanding of the underclass. He reaches back to twelfth century England to show the rigidity of hereditary class structure, when intelligence was neither evaluated nor valued. He argues that intelligence, which began to be valued in the nineteenth century, is particularly valued now because of increased geographic and social mobility, our ability to measure intelligence, and rewards to intellectual ability.

According to Darity, the managerial class is at the apex of power, directing and designing social policies. Capitalism perpetuates poverty and racism because a reservoir of the poor are needed to keep wages low. Darity sees the Reagan years as a counterrevolution in the class warfare between the managerial class and the business (capitalist) class; the managerial class designs social policy, while the business class is against most social policies. Darity feels that the social policies of the federal government, from the New Deal to the Great Society, have polarized the black population, geographically and socially separating a new professional class of black social workers and care givers from a repressed underclass of black care receivers.

Darity finds that minority (and Wolfe finds that low-income) children receive unequal education. Darity is fearful that this is a harbinger of the emergence of a policy of eugenic anti-natalism, ostensibly based on intelligence, which would impinge most heavily on the poor and blacks. Since he doubts poverty can be eliminated, Darity argues for the reallocation of the incidence of poverty, so that it is distributed equally on the basis of race and without intergenerational transmission. Darity considers equal opportunity to be a myth; the result of affirmative action is the stigmatization of those it is intended to help. Darity is pessimistic about future prospects for blacks.

Jonathan S. Leonard's paper, "The Federal Anti-Bias Effort," concerns the effectiveness of Executive Order 11246 (1974), which applies to government contractors, both prohibiting discrimination and requiring affirmative action. In discussing the history of affirmative action, which dates back to Executive Order 8802 (1941), Leonard reviews earlier studies of the effectiveness of affirmative action.

Leonard studied the employment patterns at establishments that differed only in whether or not they were subject to affirmative action. Based on this work, and studies by others, he concludes that anti-discrimination and affirmative action efforts have been effective in reducing discrimination without significantly inducing the possible hazard of affirmative action, namely, reverse discrimination.

Almost all modern economic investigation of discrimination follows from the germinal work of Gary Becker. In particular, Glen G. Cain examines the current evidence of discrimination in the United States according to Becker's ideas. Cain tries to answer the question of how much discrimination exists. Both Becker and Cain acknowledge that economists cannot accurately answer the question; not only are there problems in precisely defining discrimination, but there are limitations in the data available from which to try to measure discrimination.

In "The Uses and Limits of Statistical Analysis in Measuring Economic Discrimination," Cain considers the main problem in the measurement of discrimination, namely, that productive capacity and opportunity structure are difficult to measure, so economists tend to focus on income or earnings, which are far easier to quantify.

Cain considers the history of Irish and Japanese immigrants, who originally faced great discrimination but no longer do. In comparing the occupational distribution and earnings of Irish-American men in 1900 and 1970 and Japanese-American men in 1940 and 1980, both relative to the majority white males, Cain concludes that traditional measures of discrimination result in a paradox; from being discriminated *against*, these groups have become discriminated *for*. Cain's theme is that consistency requires the consideration of statistics to be supplementary to institutional-theoretical analysis. When historical and sociological factors are included, these cases show that while there was discrimination in the early period, there was no "reverse discrimination" in recent times, Cain concludes.

In "Occupational Segregation and the Earnings Gap: Further Evidence," Marianne A. Ferber and Carole A. Green, using a unique and detailed data set consisting of a sample of Illinois employees in 1982, investigate the male-female earnings gap, considering such detailed job-related variables as supervisory authority and control over money. They find the gender composition of the occupation significantly affects earnings; the higher the percent female in an occupation, the lower the earnings are for both males and females. Ferber and Green's study defines discrimination as males and females not having the same determinants of earnings, as well as gender affecting earnings. They find evidence of discrimination in their sample.

Discrimination in Labor Markets

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Labor market discrimination in this country has been illegal at least since 1964 when Title VII of the Civil Rights Act outlawed it. The Civil Rights Act of 1964 and the 1963 Equal Pay Act, which requires that individuals doing the same job must receive the same pay, are primarily responsible for protecting individuals against race and sex discrimination. Age discrimination is covered under the Age Discrimination in Employment Act, which was designed to prevent disparate treatment of older workers. This act has been sporadically amended and now essentially eliminates mandatory retirement.

Before analyzing the specifics of age discrimination, I will briefly describe what is and what is not discrimination in the labor market. First, in order to have been discriminated against, an individual must be in a protected category. Not all workers are members of protected classes. The largest protected classes in this country consist of females, blacks, and individuals who are covered by the Age Discrimination in Employment Act. Old is now defined as over 40.

Other minorities are also protected under the Civil Rights Act of 1964, and the definition of protected categories has evolved over time. Hispanics are protected workers, but, in most circumstances, Asians are not. For example, at the University of California, Asians do not count toward meeting any kind of quotas for racial balance. In fact, they count the wrong way, and there has been recent action by white students to limit the number of Asians because they are represented in numbers that exceed their proportion in the population. Other groups, such as Jews, are not in a protected class.

Individuals rarely win suits based on discrimination due to physical characteristics, such as obesity or baldness. Sexual preference has, with only a few exceptions, been deemed a legitimate criterion for employment, so that homosexuals rarely win discrimination suits. While some of these more controversial criteria are interesting, they are probably less important at a practical level than discrimination on the basis of education. That might seem somewhat bizarre, but it lies at the heart of what practices are permitted in the labor market.

For example, suppose that an employer imposes a requirement that an individual must possess a college degree in order to obtain a job. Suppose further that this requirement has the effect of creating a job category that is 98 percent white. Has the employer engaged in discrimination by using education as a proxy for race? The answer depends on the job-relatedness of the education requirement. If the job were garbage collector, for example, the courts would hold that education was a guise for a racial barrier, having nothing to do with the skill level needed to do the job. On the other hand, if the job required significant accounting skills, courts would probably hold that education requirement was appropriate and not merely a facade for discrimination.

There are essentially two ways to prove discrimination in the labor market context: first, by showing what is called disparate treatment, and second, by showing disparate impact. Disparate treatment is easier to prove, but it requires more direct evidence. An example of a disparate treatment case would be one where plaintiffs obtain a memo written by management that instructs subordinates to send only white applicants up for approval, either at the hiring level or for promotion. Another example of disparate treatment is one where sexual harassment can be shown by the testimony of coworkers or customers. This is sometimes referred to as finding a "smoking gun" or, in other words, the murder weapon in its just-used state. But smoking guns are rarely found.

Most discrimination actions try to show disparate impact by demonstrating that a pattern of discrimination exists. Disparate impact cases are almost always statistical in nature, and provide employment for a large number of the labor economists in the profession today. Consider the two following examples.

One case involves a local firm, Stroh's Brewery, which had two jobs: one called bottler, and the other called brewer. The Equal Employment Opportunity Commission (EEOC), alleged that those two jobs were essentially the same. But an examination of the data revealed that brewers were primarily first-generation Germans, whereas bottlers were central-city blacks from Detroit. Furthermore, a statistical analysis revealed that even holding education and experience level constant, a black was less likely to be assigned the brewer's job than a white worker with similar skills. In this case, three things need to be established. First, that the two jobs were essentially identical. Second, that the jobs paid differing amounts, and in particular, the job with white employees paid a higher amount than the job with black employees. And third, that the distribution of job assignments was not independent of race.

In order to establish the first, an industrial engineer is generally called in to testify that the tasks of the two jobs are the same. The second is easily established by looking at payroll data and correcting for experience of the individuals. Those two pieces of evidence then set the situation up for a violation of the Equal Pay Act, because the two jobs are deemed to be equal, but receive different salaries. This, in conjunction with a racial distribution that goes against a protected group, implies a violation by disparate impact.

In the particular case of Stroh's Brewery, I was retained by the EEOC and worked into the early part of 1981 when the Reagan administration took over. There was a dramatic change in the policy of EEOC at that point, and the Reagan administration instructed EEOC to settle this case within 30 days, for better or worse. On the good side, a settlement was reached between Stroh's and the plaintiffs, and costly litigation was probably avoided. Whether this had a negative effect on the future prospects of black workers at Stroh's remains to be shown.

The second disparate impact case example was an age discrimination case. New York Life was being sued by nine of its older employees who charged that they were forced to retire, and were not offered the same terms as similarly situated younger workers. This case was actually a combination of disparate impact and disparate treatment, because the nine individuals tried to bring in evidence that their superiors told them directly that they should retire because of their age. I was asked to testify by the defense in this particular case, and was able to show, by using statistical evidence, that in fact, not only was there no disparate impact that worked against older workers, but if anything, older workers seemed to be favored by the firm. That is, holding all worker characteristics constant, older general managers at New York Life received higher earnings and were more likely to be retained in their jobs than their performance would warrant, as compared with younger workers. So even though there was some evidence of disparate treatment, it was not sufficient to convince the jury, given the counter-evidence on disparate impact, that New York Life engaged in any discrimination on the basis of age.

Let me move on to a different topic, which I call the hierarchy of discrimination. Frequently, antidiscrimination policies run into conflict with one another, as when one protected group is vying with another for favorable treatment. A good illustration comes from recent Chicago patronage jobs. When Harold Washington was Mayor of Chicago, many of the jobs that had previously gone to white workers were given to black workers. In addition, a large number of city contracts that had previously gone to white firms, went to firms owned by black individuals. But Hispanics did not fare well under the Washington administration; and although they did not bring any major litigation against the Washington administration, they were instrumental in the election of Richard Daley over Washington's right-hand man, Tim Evans. Hispanics felt that they were coming into direct conflict with blacks for good jobs, and one explanation of their voting pattern is that they felt that they would do better under the Daley regime than they would under the Evans regime.

The issue, from an academic's point of view, is: How do we trade off the legitimate demands of various protected groups, and how do we decide to favor one group over another, because invariably, their demands are going to conflict with one another. I believe that labor market discrimination has the most negative social impact on equity when it is done on the basis of race. Discrimination on the basis of sex is less insidious, and discrimination on the basis of age is probably the least harmful. So if we have to choose between favoring one group or another, either in a specific situation or in terms of using scarce resources for enforcement, I would say that we should worry about racial discrimination first, and the others should follow.

My justification is to pose the following question: Assuming that discrimination is rampant and significant, who is hurt by it? If a black is discriminated against, the black suffers the full burden of discrimination. Females who are discriminated against may suffer the full burden of discrimination, unless they are married to a male who benefits from discrimination. Obviously, not all women are married; nor are women who are married, married throughout their lifetimes. But the relevant unit for most purposes, in determining the standard of living, is the household; and most women live in households that contain males. It is not true that most blacks live in households that contain whites. As a result, if tough choices have to be made, my personal view is that favoring females over blacks would have negative implications for income distribution and would be more harmful than favoring blacks at the expense of females. Furthermore, the male-female situation seems to be correcting itself, which cannot be said for the black-white situation.

Finally, age discrimination is the least important of all, for the following reason: All individuals who are old, were once young. So even if the relevant unit is the individual rather than the household, individuals who are discriminated against when they are old, will on average have been discriminated in favor of, when they were young. A second reason is that a contract, either explicit or implicit, made with the worker may cover a significant chunk of his lifetime. So, even in the absence of any discrimination, one could observe a worker who is treated one way at one age and another way at another age, as a result of totally voluntary contracts.

Preventing age "discrimination" may prevent employers and workers from entering into agreements that make both sides better off. The same is not true of racial discrimination. If a white worker and a white employer contract to exclude blacks from the job, that makes whites better off, but it makes blacks worse off. It is not the case that a black worker merely has to wait a few years until he becomes a white one.

Another kind of hierarchy of discrimination that I'd like to mention has to do with the focus of discrimination law and enforcement. Should enforcement look at the hiring decision, the promotion decision, or wages? My view is that hiring is most important; promotion is second; and wages are third. Wages are least important because once hiring and promotion have been covered, there is not much discrimination on the basis of wages. If two workers who are at the same firm holding the same job are compared, it is very unlikely that the one who is black will be receiving significantly lower wages than one who is white in some way that is not explained by seniority.

Most of the differences in earnings of black and white workers, and particularly of male and female workers, take the form not so much of wage differences within the job, but rather, finding individuals in different jobs. Men and women who are doing the same job, receive the same wages. But women do not work in the same firms that men work in; nor, within the firm, are they likely to be in the same jobs. As is well-known, women are likely to be concentrated in lower-level white-collar jobs, clerical jobs, and less well paid service jobs. So to the extent that there is discrimination against females, correcting the job assignment is likely to remedy most of the problem. The reason that I put hiring first, is that industrial differences and firm differences are really quite significant. Women, for example, are found to a much greater extent in service industries, and males to a much greater extent in durable manufacturing. That may be choice rather than chance; but to the extent that it is discrimination, it is implemented by discrimination in hiring.

Let me turn now to some evidence on what has happened in recent years and what we should be worrying about. Perhaps the most important statistic shown in recent wage studies is that women are doing better; and, some people think, a lot better. Labor force participation rates for females continue to rise, and despite this large labor market inflow by women, wages of females have not only kept up, but have gained on their male counterparts.

Females are much more likely to be found in professional jobs today than they were 10 or 15 years ago. In the typical business school today, anywhere from 20 to 40 percent of the students are female, whereas 20 years ago that number would have been closer to 2 percent. The same is true in medical schools, and particularly in law schools. So there is a substantial professionalization of the female workforce.

While it is still true that females do not seem to have gotten significant access to many jobs, such as very high level positions in major corporations, there is evidence that we are seeing a vintage effect. That is, since females have only recently made progress into middle levels of management, it will take a few years before we observe a high proportion of females in upper management as well. I have little doubt that females will be moving into those jobs in significant numbers, although perhaps not in proportion to their numbers in the population. So I think the situation for females is getting much better.

Unfortunately, the same thing cannot be said for blacks. In the last presidential campaign, much was made by the Dukakis camp of the widening income distribution. The income distribution has gotten less equal in recent years for two reasons. First, wages of highly educated, highly trained workers have gone up. Second, wages of unskilled workers have fallen. This is particularly significant for uneducated blacks.

High school dropouts have been hurt badly by the trends of the '80s. Not that new jobs are bad. Just the reverse. But jobs formerly in Michigan are now in Japan, Taiwan, Korea, Hong Kong, and Singapore.

There are at least two interpretations of these data. First, it can be argued that wages are falling for blacks, and particularly for less educated blacks, because of increased discrimination. This might be attributed to political changes—for example, the Reagan policies of the '80s; or to increased desire by firms for discrimination. The latter seems unlikely, but the former remains a candidate.

The second possible explanation is that changes in the industrial structure of the United States have decreased the wages of unskilled labor relative to those of skilled labor, and that this has nothing to do with changes in discrimination. My view is that the evidence points to the second—namely, to the industrial shifts explanation. First, the industries that have been hurt the most are those that have had the largest proportion of foreign competition. So it looks as though unskilled workers in the United States are unable to compete successfully, at current wages, with unskilled workers overseas; but skilled workers in the United States seem to do quite well in organizing foreign unskilled workers. The second factor pointing in that direction is that if it were merely policies of the Reagan administration that were causing the change, then it would be difficult to explain why women are doing better and blacks are not. It is hard to believe that the Reagan administration targeted women for protective enforcement and blacks for neglect. So while discrimination may continue to be an issue in the United States, it is my view that it cannot explain changes in black-white or male-female wage differentials.

I'd like to turn now to what in some sense is the fundamental question whenever discrimination is discussed: whether differences between races or sexes reflect choice or chance. Are blacks in low-paying jobs because they choose not to undertake training to the same extent as white or are blacks forced into those jobs because of discrimination in the system? Similarly, we observe that females tend to be in low-paying occupations and low-wage industries. Is that because they are precluded from entering certain occupations, or is it because women prefer to work in occupations that do not require serious commitments to the job but rather tolerate high turnover rates?

As difficult a question as this is to answer, there are data that speak to the issue. Duncan and Duncan (1955) devised an index to measure the amount of segregation in an economy. The Duncan index is a number that tells you the normalized proportion of individuals that would have to be moved in order to fully integrate a workforce. So for example, suppose that 50 percent of the workforce is male and 50 percent of the workforce is female; and suppose further that all females are in one job and that all males are in another job. Then in order to integrate the workforce fully, 50 percent of the females would have to be moved, and 50 percent of the males would have to be moved. The ratio of the number of people moved to the male population is the Duncan index; so in that case the number would be one. If women and men were assigned jobs randomly so that 50 percent of each set were in each job, then the Duncan index would be zero, because no one would have to be moved in order to totally integrate the workforce. So a number of zero means a fully integrated workforce; a value of one means a segregated workforce.

If a Duncan index is computed for males and females, the number turns out to be about .6. If the same exercise is done for black males and white males, the number is .2—meaning that many fewer workers would have to be moved in order to even out the job distribution. So black jobs are much more like white jobs than female jobs are like male jobs. Now, the ratio of black male wages to white male wages exceeds the ratio of white female wages to white male wages, but not substantially so. This means that people who receive similar earnings outcome in the economy relative to white males have very different occupational patterns.

Fuchs (1989) has interpreted this as meaning that the job distribution reflects choice and not chance. He argues that it is difficult to believe that black men face less discrimination than white females to such an extent that their jobs are quite similar to those of white males, whereas females are so discriminated against that their jobs are totally different. Recently, Francine Blau (1989) found that the Duncan index, which was falling for females for a period of time, is now starting to rise again, as new jobs are becoming female jobs.

The fact that women are concentrated in jobs that are not likely to be held by men has led the women's movement to push for comparable worth legislation; the comparable worth doctrine says that jobs have some inherent worth that can be measured, perhaps totally independent of the marketplace. For example, by assessing the kind of work that is done and the kind of responsibility associated with a nurse's job, we can determine the value of that job and compare it with the job of an electrician by looking at similar factors. This idea has gained legitimacy, and has actually been implemented in a number of countries—most notably, Australia. In Canada, the province of Ontario implemented comparable worth across the board about a year ago.

There are several arguments against comparable worth. The first is that the market is the only index of worth, and there is never any reason for the government to intervene. This view is too strong. To accept it is to accept that there is no role, for example, for antitrust policy. If the market is the only index of value, then prices set by a monopolistic firm are the correct prices, and there is no reason to worry about cartel or monopoly behavior of any kind.

Even the staunchest defenders of the free market at my institutions generally allow that firms have an incentive, if through no other way than attempting to influence government officials, to restrict markets, and to try to monopolize them. This creates inefficiencies in the economy that must be undone, and in these limited circumstances, government action is appropriate.

Once we allow for those kinds of arguments, then it seems clear that we can also extend the arguments to the labor market. Thus the dismissals of comparable worth on the grounds that it is a deviation from market prices, seem to me insufficient. Additionally, to even discuss comparable worth, you have to entertain at least the possibility that discrimination occurs in labor markets, so I shall begin with the working assumption that wage differentials in jobs may reflect discrimination.

For example, consider two occupations, nurses and electricians, and assume that electricians earn higher wages than nurses. First, one must ask why, under these circumstances, nurses don't enter the electrician occupation? There are two answers. The first answer is that they don't want to. If that's the answer, then there is neither a problem nor a remedy.

The wage differential between nursing and electrical work here reflects what we think of as an equalizing difference. Being an electrician is either harder, less interesting, or less rewarding in some other respect, and it must command a higher price as a result. The difference in wages under those circumstances would merely reflect a return to increased effort and pain associated with working that job. So if it is choice, then comparable worth clearly is an inappropriate remedy.

The second possibility is that the difference in wages between the male and female jobs is not the result of choice but the result of an exclusionary policy by either employers or unions in the electricians' occupation which has somehow been effective at keeping females out of the occupation. Under those circumstances, discrimination has occurred and some adjustment is necessary. What comparable worth would seek to do is to raise the wage rates of nurses up to the wages of electricians or to some other "comparable" job. The effect of this policy is to attract both women and men to the nurses' occupation, which makes the problem worse, not better.

In fact, it does not address the problem at all. The problem, as you'll recall, is that women are precluded from entering the other occupation. If there were free mobility into the other occupation, there would be no problem in the first place, and comparable worth would not be needed. So the appropriate remedy is not comparable worth, but vigorous enforcement of Title VII of the Civil Rights Act, which prohibits job assignments on the basis of sex.

So by this reasoning, there is no role for comparable worth in the economy. Either wage differentials are there as a result of choice, in which case there is nothing to remedy; or wage differentials reflect discrimination, but the remedy for that discrimination is the removal of entry barriers into the segregated occupation, not raising wages in the flooded occupation.

There are some counters to this argument. The first counter, and probably the most compelling one, is that we've had Title VII since 1964 and it hasn't worked, so we need to think about some other remedies. But if Title VII has not worked, why should comparable worth? In order for a law to work, enforcement is required, and enforcement can be applied to any law, if there is sufficient desire. The fact that Congress passes a statute that requires firms to set wages in some particular way does not mean that this will happen. If comparable worth can be enforced, so can Title VII, and I'd much rather see society's resources devoted to enforcing laws that create efficiency rather than laws that create inefficiency. The second problem is that enforcement of comparable worth is not without its costs. It would have the effect of creating an industry of experts and counter-experts, who would assess jobs and their worth for all parties. Litigation, as we are all aware, is not without its cost.

There are many problems associated with attempting to create indexes of worth. The first is that such indexes are subjective, and there are two levels of subjectivity. An index is subjective at the level of the index itself, and it is subjective at the level of the evaluator. First, I will provide an illustration of subjectivity at the level of the index.

Let there be two jobs, a schoolbus driver's job, and a sculptor's job, and suppose that we are constructing an index of job value by ranking the job on two of its characteristics: responsibility associated with the job, and know-how and skill associated with the job. Assume we all agree that a sculptor's job requires the maximum amount of skill, but has the minimum amount of responsibility associated with it, and that the schoolbus driver's job requires the minimum amount of skill, but the maximum amount of responsibility is associated with it. Let's suppose further that the index for know-how goes between 10 and 15, whereas the index for responsibility is between 8 and 12. The sculptor receives 8 points for responsibility, but 15 points for know-how, giving us a total of 23 points. The schoolbus driver receives 12 points for responsibility, but only 10 points for know-how, making a total of 22. So, by this index, the sculptor is worth more:

Scale: Responsibility 8–12	Know-how 10–15
Sculptor receives	8 + 15 = 23
Bus driver receives	12 + 10 = 22

Consider a slightly different scaling, where the know-how scale stays the same, but we change the responsibility index so that its values go between 7 and 13, as opposed to between 8 and 12. Now the sculptor, who has the minimum amount of responsibility associated with his job, gets a score of 7 on responsibility, and 15 on know-how, giving us a total of 22. The schoolbus driver receives 13 on responsibility now, since that job requires the maximum amount, and a 10 on know-how, giving a total of 23. The schoolbus driver's job is now worth more.

Scale: Responsibility 7–13	Know-how 10–15
Sculptor receives	7 + 15 = 22
Bus driver receives	13 + 10 = 23

But these scalings of 8–12 or 7–13 are somewhat arbitrary. It's very difficult, *ex ante,* to judge which is the appropriate scaling, and very few of us would be willing to take a stand on one scale versus another. So I can reverse the value of jobs very easily by making minor changes in the values of the scales, and they might imply very different things about the amount of discrimination in an economy.

A second problem with indexes of this sort is that they are arbitrary at the level of the evaluator. Whereas I might assess the responsibility level of a sculptor's job at 7, someone else might give it an 8 or a 9. Similarly, someone might think that the know-how associated with being a schoolbus driver is not merely 10, but that it requires a level of 12. Different evaluators will have different opinions, so that the index itself will be a function of the individuals evaluating the job. That is not a particularly attractive feature of an index on which salaries are going to be based.

The final problem with thinking about indexes and basing judgments about discrimination on them is that indexes of this sort focus on between-job rather than within-job variations, as illustrated by the following example. Suppose that there are two jobs in the economy, one job which is called the male job because it has two men in it and one female; and one job which is called the female job, because it has two females and one male. In the male job, Mr. Smith and Mr. Jones each earn $12,000 per year; Ms. Johnson earns $18,000 a year; so the average wage in the male job is $14,000. In the female job, Ms. Jackson and Ms. Roberts earn $15,000 a year; and Mr. Hill, the only man in the job, earns only $6,000 a year; so the average is $12,000.

Now in this extreme example, you'll notice that the average wage in the male job is higher than the average wage in the female job, and we might all agree *ex ante* that the female job is a more valuable job in some sense than the male job. Suppose we do. We might draw the inference from those numbers that females are discriminated against in this economy, because the jobs in which females happen to be located receive the lowest wages, even though those jobs are the higher valued jobs. But that inference would be completely inappropriate in this economy. If you'll notice, within job, women earn more than men. Also there is not one man in this economy who earns as much as the lowest paid female in the economy. The highest paid men in the economy are Mr. Smith and Mr. Jones, who earn $12,000 a year. The lowest paid females in the economy are Ms. Jackson and Ms. Roberts, who earn $15,000 a year. All female wages are higher than all male wages, and yet we would be inferring from this comparison that women are discriminated against. Nothing could be further from the truth. We are led to this inappropriate inference because the focus is on between-job comparisons, rather than on individual-based comparisons.

Male Job		Female Job	
Mr. Smith	$12,000	Ms. Jackson	$15,000
Mr. Jones	12,000	Ms. Roberts	15,000
Ms. Johnson	18,000	Mr. Hill	6,000
Average	$14,000	Average	$12,000

The absurdity of indexes is perhaps best illustrated by applying the technique to the product market, particularly, cognac and milk. It is likely that most sensible indexes would value milk more highly than cognac. After all, milk can sustain life; cognac cannot; and milk's social value seems much higher. Yet the price of cognac can be 30 (or more) times that of milk. Inferring that females are discriminated against in favor of males, by looking at wages versus external indexes of worth, is analogous to inferring that dairy farmers are discriminated against and grape producers favored because cognac, which is worth less than milk, receives 30 times its price.

Returning finally and briefly to age discrimination, the elimination of mandatory retirement by extension of the Age Discrimination in Employment Act to all-age individuals can have adverse effects on the economy. The major effect in my view is that mandatory retirement is the outgrowth of an incentive scheme which pays young workers less than they are worth and old workers more than they are worth, in order to provide performance incentives to workers who are close to the retirement age. The elimination of mandatory retirement makes it more difficult to use life-cycle compensation as an incentive device. In an era when productivity factors are important considerations, I think that the generalization of the Age Discrimination in Employment Act cannot have positive effects.

On the other hand, the empirical evidence suggests that the elimination of mandatory retirement is not particularly important. What estimates there are, reveal very small increases in the labor force participation rates of older workers. The exception is in academics, where work is so poorly defined that there is much less reason to retire.

Firms can also easily evade these laws by structuring the pension plan so that individuals who continue to work are penalized in the form of a lower present value of pension benefits, giving workers an incentive to retire. Virtually all defined benefit pension plans in the U.S. have the feature that once a worker works beyond a certain age, usually somewhere around 60, additional years of service reduce present value of the pension. The annual pension goes up, but losing that year's worth of pension more than offsets the increase in pension in subsequent years. A strategically designed pension plan is a substitute for mandatory retirement and is a way to evade changes in the Age Discrimination in Employment Act. Courts have looked carefully at such pension provisions, but they have not cared much about reductions that are more than actuarial as an individual ages.

In conclusion, the effects of antidiscrimination legislation are unclear. First, there has been an increase in unemployment rates, and particularly unemployment rates among black workers; but the increase began well before the Civil Rights Act of 1964 was passed, and certainly before it had time to really bite. So it would be difficult to argue that the Civil Rights Act has had much effect on increasing unemployment. Second, in countries where comparable-worth-style legislation has been implemented, a number of researchers have found that there is not much effect on employment. An Australian named Bob Gregory has found virtually no effect, although some of his colleagues find some significant decreases in employment among females.

But the basic result seems to be that discrimination laws do not have obvious detrimental effects on employment in an economy. Nor do they seem to have any obvious positive effects on wages. Average wages of females are up slightly, relative to males; but average wages of blacks, especially low-wage blacks, have not risen, relative to whites since the mid-1970s. To the extent that there has been long-term enforcement of discrimination laws for any group, blacks should be the most positively affected.

In conclusion, then, I believe that the picture on discrimination laws is mixed. In theory they are a good idea, but implementation has been uneven and the laws are perhaps harmful. But because they are enforced so poorly, even bad implementation seems to have little detrimental effect on the economy.

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Discrimination Within the Family

The Treatment of Daughters and Sons

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My topic is the comparative parental treatment of daughters and sons and whether any unequal treatment should be labeled "discrimination." I have chosen such a strange topic because economists find it difficult to explain why a freely functioning, competitive market would allow equally skilled employees to receive unequal pay for equal work. Yet, as summarized below, such a situation seems to exist between men and women. Economists like to argue, therefore, that nonmarket institutions such as the school system or the family have produced daughters and sons who are not equally skilled in some dimension not yet measured by researchers. This paper will cast some doubt on this conclusion.

I first sketch out the historical path of the ratio of female to male wages under the assumption that discrimination in the labor market is defined as equally qualified men and women not receiving equal pay. Determining that men and women are equally skilled, however, is a hard task empirically.

I then explore the reasons why economists find it difficult to explain how discrimination can persist in the long run in markets that are competitive. Hence, I next examine families to see if we can observe parents treating daughters and sons differently and thereby creating unequally skilled children. In doing this, I examine studies that quantify some aspects of family environment that may affect subsequent performance in the labor market. I do not, however, cover many psychological aspects such as aggressiveness or submissiveness, since they are not characteristics studied by economists. Finally, I provide a definition of discrimination within the family and discuss what is known on the topic.

Labor Market Treatment

In a labor market without discrimination, equally qualified men and women would receive the same compensation for the *same work*. Many people, therefore, treat as evidence of labor market discrimination unequal pay for workers with the same *measured qualifications*. Sometimes these studies compare wages for the same occupation, though this ignores the question of whether discrimination operates by reducing access to some occupations for women. In any event, qualifications are an imperfect measure of either work or effort.

Even insuring that people have the same qualifications is a tricky business. Sometimes "equally qualified" is defined by looking at specific age and education groups. Sometimes not even such crude adjustments are made. There are other variables that have not been used at all by economists in defining equally qualified groups. Loehlin and Nichols (1976, p. 11), for example, present average scores for female and male high school students for various components of the California Personality Inventory. There are noticeable gender differences on items such as "social presence" or "communicality."

Labor market differentials between women and men have a long history. For example, *Leviticus* 27: 1–4 indicates that female slaves sold for about 60 percent of the price of male slaves.[1] It is also possible to reach further back in time. The Museum of the University of Pennsylvania has a large collection of Sumerian commercial records baked in clay. Some economic historian might find it interesting to calculate a "weighty" average of male and female slave prices for this civilization.

For the U.S., most attention has focused on the post-World War II period. However, Goldin (1990) has examined developments in the labor market for women back to the beginning of the nineteenth century. She finds that the ratio of female to male wages was a bit less than .5 around 1900. In the 1950s and 1960s, this ratio was about .6. More recently, Smith and Ward (1989) show it has risen to about .65.

In judging the level and the time pattern in this ratio, several issues must be kept in mind. First, since 1950, the percentage of nonelderly married women participating in the labor force has more than doubled, reaching 60 percent in recent years. It is quite possible that women workers today have different innate and acquired skills from the women workers of the 1950s.

Smith and Ward (1989) have calculated the differences in education and experience for all and for working men and women.[2] The working women are not a random draw from the female population. Smith and Ward (p. 12) indicate that among workers over the period 1940 to 1970, "women on average, lost almost a year of education and gained only half a year of market experience" compared to male workers. However, for the *population* at large, the present female and male labor force is generally more knowledgeable than the population in 1950, though there have been intermediate periods where the population has had greater knowledge than today's workers.[3] Comparable numbers on knowledge levels for the people who work are not available.

The life cycle pattern of labor force participation of women complicates the analysis and the interpretation of the female/male wage ratio. To understand this, I must digress to explain the concept of general on-the-job training. Such training, which can be provided by parents, schools, and firms, increases an individual's (marginal) productivity and wages at many jobs. In a competitive world, all these jobs should pay the same wage; hence, any firm that provides training cannot recapture expenditures on training through reduction in future wages. Therefore, the person being trained must pay for these expenditures now via tuition or reduced current wages.

It is possible that the influx of women into the labor force in the 1950s, 60s, and 70s lowered the *average* amount (stock) of training of women in the labor force in some years, since there were so many new workers at many ages.[4]

Two other life cycle-related events are important. Often when a child is born, the mother takes formal, temporary maternity leave or drops out of the labor force for a more extended time.[5] Since any worker's return to general training occurs in the form of higher wages when working, younger women contemplating having children may be reluctant to choose positions with higher training components and with lower current and higher future earnings. (Of course, this also implies that, when beginning a labor market career, women should receive greater wages than men, which we don't observe.) Moreover, Mincer and Ofek (1982) indicate that women who return to the labor force after being out more than one year receive lower wages than when they left work, with this differential increasing with the amount of time spent out of the labor market. However, they argue that this deterioration is quickly overcome. Still, a larger increase in reentrants will drag the female/male wage ratio down.

Suppose this gender wage ratio is less than 1. Is this an indication that sexual discrimination exists in the labor market? As my previous discussion indicates, the answer is "not necessarily," because men and women could have engaged in different previous on-the-job training programs. In addition, they can have different skills or may have selected jobs with different attributes that trade off for wages. Bound, Griliches, and Hall (1986), using a sample of brothers and sisters, find that there are unobserved but latent family effects on schooling, IQ, and earnings, and that these effects "are sex blind" (p. 97). Lucas (1977) finds substantial wage rate tradeoffs for nonpecuniary job characteristics with some differences by gender. These differences explain a portion of the gender wage differential.

Moreover, average differences in *observed* characteristics, such as years of work experience, account for much of the observed difference in the wage ratio (see Neumark 1988). Corcoran and Duncan (1979) find that completed years of training on current job and "other work history" explain about 40 percent of the wage gap observed in 1976. Yet the ratio adjusted for differences in the average of observed characteristics is still less than 1.

In spite of this consistent finding, many economists are reluctant to label this difference as "labor market discrimination." Let me sketch out why.[6] We distinguish three types of discrimination: employer—in which the boss suffers pain or disutility from employing women or nonwhites in a job; employee—in which one type of worker suffers pain or disutility from laboring with workers of another demographic type; and consumer—in which the buyer of a product suffers pain or disutility from buying a product made or sold by someone from another ethnic or gender group.

For simplicity, assume that all workers have the same skill level and that there is full employment. In the employer model with fixed capital, there can initially be discrimination with the disfavored group receiving a smaller wage. The gender wage differential must be set so that both female and male labor markets clear at the going wage rates. The amount of the wage differential will depend on how much the *employer* of the last woman needs to be compensated (for the disutility he incurred) by reduced female wages to hire her. This same gender differential will be paid for all equally skilled women, since they are assumed to be interchangeable.

However, suppose some employers have less gender distaste and are more willing to hire women. The more women capitalists hire, the greater will be their profits, since women workers are hired at a lower wage than equally skilled men. In the long run, these more profitable employers can expand their firms—as long as lenders and investors only care about interests and profits. This will increase the demand for the female labor force. Bigger bigots will have lower profits and their capital will shrink over time. As long as some people aren't discriminators, the long-run equilibrium is one where all equally skilled people are paid the same wage for the same work.

Employee discrimination also can be found in the short run, but if mixed workforces cause the employer to pay higher wages, competitors can be expected to set up gender "pure" plants. Since by assumption all workers are equally skilled, equilibrium requires equal pay at *segregated* plants.

Consumer discrimination may be viable in both the short and long run, but this type of discrimination is not thought to be very important for the economy as a whole. For most products, you don't know who made a good. Of course, you may know from whom you bought it, but retail trade, which includes more than sales, accounts for less than 5 percent of our jobs and about 12 percent of civilian employees are in sales at all levels of trade.

Leaving aside consumer discrimination, economists have a difficult time explaining why discrimination should be found in labor markets in the long run. Wage differentials, however, are found between men and women with the same education and years of job experience, though these differentials have narrowed in recent years. Several possible explanations are: economists don't know how to model the labor market; the labor market isn't competitive; adjustments to eliminate discrimination take a very long time; or people with the same length of job experience and years of schooling are not equally skilled, perhaps because of treatment within the family.

As a practicing economist I am willing to reject the first reason out of hand, and I note that numerous studies have generated results consistent with economic models of the labor market. While Akerlof (1985) has shown how discrimination could persist in a noncompetitive labor market, it is difficult to believe that such noncompetitiveness is pervasive enough to have a major impact on wage ratios.

It is possible that the adjustment process is very slow. For example, Margo (1986) shows that a child's literacy depends strongly on the parents' literacy. The time since emancipation in this country—a date when less than 20 percent of blacks could read (Smith 1984, p. 691)—may not be long enough to have made blacks and whites functionally literate to the same degree, given this intergenerational link. However, if adjustment takes this long, economic theorems about the long run lose much of their interest.

The possibility that differential treatment in the family produces sons and daughters with different quantity and quality of skills and human capital remains and is the focus for the remainder of this paper.

The Role of the Family

Parents can be very important in shaping the socioeconomic outcomes of their offspring. For example, among same sex identical twins about 50 years old, the correlation in earnings is nearly .6 (even with no allowance for measurement error).[7] On measures more closely attuned to childhood, the identical twin correlations are even higher, ranging up to .95 for IQ.

These twin correlations occur because of both genetic and environmental linkages. I will not dwell at great length on the genetic linkage or its measurement though I will note that I have generated some (controversial) estimates that suggest that genes explain much of the individual difference (variance) in schooling and earnings.[8] It is of more importance to consider how much parents can influence their children through the provision of their environment. Of course, if all effects are either genetic or environmental, then it must follow that environmental effects are "surprisingly small," but they are nowhere near zero.

In some samples it is possible to divide environmental effects into those "common" to siblings and those that are specific to a child.[9] The available literature suggests that the "common" environmental component, with which no parental discrimination can be associated, has limited impact on the across-family variance in socioeconomic and psychological outcomes—though most studies measure this common environment for brothers. See Behrman et al. (1980), Behrman, Pollak and Taubman (1989), Scarr and Weinberg (1976), and Tellegen et al. (1988), which use a variety of techniques and samples. Individual specific environment can be provided both in and outside of the family. The individual environment provided by the family could differ by gender and make daughters and sons unequally skilled.

I next examine what we know about differential provision of environment by child's gender and then refine by definition of parental discrimination.

The Treatment of Daughters and Sons

Smith (1984, p. 687), using published Census documents,[10] presents estimates of average years of schooling completed for white and black males and females. His table 3 is reproduced (with permission of the *AER*) as my table 1. As shown in this table, through the 1916 to 1920 birth cohort, white women have up to .5 of a year more education than white men. From then through the 1946-50 birth cohort, white men (many more of whom would have been eligible for education benefits from the G.I. Bill) have an advantage over white women of less than .25 of a year of schooling. My updated results from the 1980 Census suggest a slight advantage for white women in the next age cohort—1955-1959. Black women have generally had about .5 of a year more education in most birth cohorts than black men.

Table 1
Mean Schooling Levels by Birth Cohort
(Years of Schooling)

Birth cohort	White males	Black males	White females	Black females
1951-54	12.64	11.82	12.70	12.24
1946-50	12.68	11.93	12.45	11.86
1941-45	12.32	11.25	12.14	11.33
1936-40	12.00	10.46	11.81	10.89
1931-35	11.69	9.78	11.52	10.37
1926-30	11.38	9.11	11.33	9.87
1921-25	11.14	8.44	11.12	9.03
1916-20	10.74	7.65	10.79	8.36
1911-15	10.15	6.75	10.36	7.70
1906-10	9.72	6.26	10.02	7.16
1901-05	9.19	5.72	9.45	6.46
1896-1900	8.74	5.42	8.96	6.03
1891-95	8.18	4.96	8.42	5.52
1886-90	7.74	4.72	8.11	5.13
1881-85	7.56	4.38	7.95	4.67
1876-80	7.44	4.11	7.88	4.27
1871-75	7.22	3.56	7.58	3.59
1866-70	7.07	3.06	7.45	2.89
pre-1865	6.76	2.37	7.13	1.99

SOURCE Smith 1984, p 687

The differences in any birth cohort are small and in this dimension of human capital there seems to be no presumption of gender discrimination by parents. However, the use of averages does not speak fully to the issue. Until about 1980, a larger fraction of men than women went to college. See Goldin (1990). While this may indicate a greater parental financial contribution to sons, it should be noted that after finishing school, daughters typically work before marriage. If she lives with her parents and contributes funds, the family is foregoing some of this potential income while the daughter finishes high school.

Parents may also affect children's future prospects by sending them to private and parochial precollege schools.[11] Table 2 presents information on the percentage of each sex who attended public school in various years. Only small differences exist with no clear gender pattern. Similar results hold when education is divided into elementary and secondary levels. Also, the number of female and male students in Catholic schools are about equal.

Table 2
Percentage of All Students of Each Gender 3 to 34 Years Old Enrolled in Public Schools

	1950 %	1960 %	1966 %	1974 %	1981 %	1986 %
Male students	89.4	86.3	87.1	88.6	87.2	87.6
Female students	88.8	85.7	86.2	87.8	87.2	86.2

I have also estimated a logit model, in which I distinguish public, Catholic, and other private high schools, for a 1957 Wisconsin High School senior sample. While IQ, living in a rural community, and parental income have highly significant coefficients, the coefficients on gender are very small and highly insignificant.

Parents can support their children at college and influence their college choices via nonmonetary means. In the Ivy League, less than half of the undergraduate body is female, though the female percentage may be rising. At the University of Pennsylvania, which has an undergraduate nursing school, engineering school, business school, and college of arts and sciences, the percentage of female freshmen matriculants has risen from about 40 percent in 1978 to about 45 percent in 1988. Penn's admissions are need-blind. About half of Penn's students are not eligible for financial aid because of own and parental income and wealth. Women account for 42 percent of the freshmen students receiving aid in 1988.

In interpreting these results, note that Penn admits about a fourth of its freshmen solely on the basis of academic standing. The remainder are admitted on a combination of academic and nonacademic credentials, but as far as I am aware gender is *not* a criteria of diversity. Thus, judging by Penn, there is a slight tendency for daughters to have a marginally smaller chance to attend an Ivy League school, and those daughters who attend come from slightly wealthier families. The available evidence, e.g., Taubman (1975), which is based solely on men, indicates that people who went to schools where students have higher SAT scores and better facilities have greater income, even after controlling for own intelligence, job preferences, and a huge number of family background variables.

While years of schooling is the easiest data to obtain about daughters and sons, some additional information is known. For example, Behrman and Taubman (1986) indicate that daughters who attend college receive $315 per year more parental monetary support than sons in college.

Behrman, Pollak, and Taubman (1989) have begun to examine a new sample of 1985 Pennsylvania high school seniors, which was provided to them by Professor M. Tierney. This sample matches records from applications to the Pennsylvania Higher Education Authority (PHEA) (by Pennsylvania residents) with records from the Education Testing Service (ETS). The PHEA data include parents' (or if they are independent their own) federal income tax returns, the school they are attending, and the cost of attendance net of scholarships, and also net of loans provided by the federal and state government.[12]

Behrman, Pollak, and Taubman examine the college choices of sons and daughters. Schools in the sample can be characterized by type, such as private high-cost, out-of-state, etc., and by dollar amount of costs before and after scholarships. In logit equations for type of school, there are strong effects of parental income, SAT scores, and ethnicity. There are also significant but very small effects of gender in a sample where women are 53 percent of the total. The largest difference is no more than 10 percent, and sons only have an advantage for Pennsylvania state-owned schools[13] and community colleges, which are the inexpensive choices. However, the female percentage is generally smaller than the 53 percent found in the samples.

They also examine the amount spent on colleges. Tuition (gross and net of scholarships and loans) is positively related to parental income and to the child's gender. Girls expend 2 to 3 percent more, even with parental income held constant. Hence, there is little overall difference in the type of college attended by the 10,000 students except in the greater attendance of men in the low-cost groups given above. This is at variance with the Penn experience.

Parents can contribute more than money to prepare their children for adulthood. Parental time, examples, and emotional support can all help determine the amount of human capital a child takes to the labor market. Economists have not tried to measure the other two elements, but they have done a little work on parental time inputs. Leibowitz (1974) has used the data in the Terman sample of California children in school around 1920. However, these individuals were in the top 2 percent of the IQ distribution, and it is not clear how her results generalize to the whole IQ distribution, the rest of the country, or more recent generations. Nevertheless, parental "hometime" spent with the child was about the same for daughters and sons (p. S131).

More recent time budget studies such as those summarized in Hill (1985) make a distinction between fathers and mothers, but not usually between daughters and sons. However, Hill and Stafford (1980), using a detailed time budget study, note that (p. 221) "college-educated mothers devoted more time to the care of their preschool daughters than to their preschool sons, while the converse was true for those mothers with less than a college education."[14]

Studies that relate men's and women's earnings to parental characteristics, such as education, exist, though their interpretation is complicated by the large number of women not working at a point of time. This is less of a problem when studying years of schooling. A recent summary of this education literature is given in Behrman and

Taubman (1985), where some evidence is presented that the father's education has relatively larger impacts on the son's success and the mother's on the daughter's success.

As noted earlier, Bound, Griliches, and Hall (1986) find that latent family effects for the variance of IQ, years of schooling, and the natural logarithm of earnings are essentially the same for both sexes. When panel data are available for siblings, it is possible to estimate an individual fixed effect. Furthermore, using sibling panel data, the fixed effect can be decomposed into a family effect common to each sibling and an individual specific effect. Solon et al. (1987) find that the family component shared by siblings and the individual effect not shared by siblings are about the same share of the variance in the log of income for both sexes.

Childhood activities may also affect both the amount of schooling progenies obtain and their future labor market success. For example, for men Taubman (1975) shows that having spent much time on chores as a child is associated with about a 10 percent reduction in earnings near age 50, but that a large amount of time spent on part-time work is associated with a corresponding increase in earnings at the same age.

Generally it is not clear if the parents influence the children's willingness to take part-time jobs or to drop out of work. When child labor was common, as in the nineteenth century, there is less of an interpretative issue. Parsons and Goldin (1989) show that beginning in the age category of 5 to 10, males are more likely to be at work and not in school than females, though the differential varies by children's wage opportunities and fathers' wages.[15]

As shown in table 3, there are differences in labor force participation rates[16] between males and females aged 16 to 17. Males are more likely to work whether black or white; however, the gender differential has narrowed substantially over time. Over time, males have participated less in the labor force while female participation has increased. It is not obvious to me if these trends represent parental changes in support for their children, parental discrimination, growth in fast food and other teenage work opportunities, or extra protectiveness for daughters in the past.

Table 3
Labor Force Participation Rates of 16- and 17-Year-Old Men and Women (percent)

	Males			Females		
	All	White	Black	All	White	Black
1948	52.1	NA	NA	31.4	NA	NA
1954	47.1	47.1	NA	28.7	29.3	NA
1964	42.8	43.5	NA	27.4	28.4	NA
1974	50.5	53.3	34.0	40.4	43.3	22.7
1983	43.2	46.9	24.7	39.9	43.9	20.8

SOURCE U S Department of Labor (1985)

It is possible to extend the story back to slightly earlier ages. Timmer, Eccles, and O'Brien (1985) use diaries collected from children to determine how they spend their time. During the week, boys and girls aged 12 to 17 average about 20 minutes a week at market work. However, girls spend 40 minutes and boys 16 minutes per week at housework, which may have consequences in the future. During weekends males and females average about 60 minutes and 25 minutes at market work, respectively, while household work averages 45 minutes and 1.5 hours for males and females.

A few studies have examined the distribution of financial assets. Menchick (1980) finds that estates are split evenly among daughters and sons. In another study, he found that more than 80 percent of estates with multiple surviving children are split evenly; hence, little room exists for gender differences.

Behrman, Pollak, and Taubman (1989) examine the distribution of "help from relatives." They use the Michigan Panel Survey of Income Dynamics (PSID). The PSID surveyed a random sample of people in 1968. The same people and split-offs from their household have been followed through the current time period. Behrman, Pollak, and Taubman studied the average-help-received variable for the period 1982 through 1984 for children who were less than 18 in 1968 and not students in 1984. They found that females receive about one-third less help than men, but this amounts to less than $90 per year. Incidentally, they found only minor effects of own earnings or parental income on help received from relatives.

There is little evidence of differential treatment by gender of children. Would such differences, if found, be evidence of discrimination, and is the absence of differences evidence of nondiscrimination? The answer to both questions is "not necessarily," for reasons shown in the appendix to this essay.

Conclusion

In this paper I have examined the little evidence available on the treatment of daughters and sons by parents. Raw statistics on bequests, transfers, earnings and educational attainment suggest little difference by gender. College expenditure data for Pennsylvanians indicate that girls on average go to slightly more expensive schools.

I have also constructed a formal model in which I translate discrimination into parents caring more for or giving more weight to one child's earnings in the parents' utility function. By making some strong assumptions, it is possible to generate an equation where we can determine if parents discriminate against one sex in the provision of education. Based on one U.S. sample, parents care equally for sons and daughters. Hence, if there are labor market differences in earnings, they are not arising because of parents favoring boys.

NOTES

1 See *The Torah: The Five Books of Moses* (1962)

2 Recently the increased labor force participation of women with high-earnings spouses had led to increased inequality in family income (adjusted for family size) See Danziger, Gottschalk, and Smolensky (1989) This suggests a recent increase in skills of the female labor force

3. See Bishop (1989), who uses data on SAT scores—which peaked in the mid-1960s—and other measures of knowledge

4 For some evidence on this, see Goldin (1990); however, see Smith and Ward (1989) for contrary evidence

5. See Hill and Stafford (1980)

6. See Arrow (1973) for more formal proof.

7. Behrman et al (1980)

8. See Behrman et al (1980) and Behrman and Taubman (1989)

9. Corcoran and Datcher (1981) indicate that much of sibling similarity in schooling and earnings can be proxied by a list of parental characteristics such as education, they do not worry how much of these effects are genetic or environmental, and sibling similarity omits about half of the genetic effect and specific environment provided by parents to a child

10 There may be a bias in his data for our purposes because some members of a birth cohort died prior to the 1940 Census—the first one used Age-specific mortality is related to education, with the more educated living longer, and to sex, with women generally living longer, but birth-related deaths may have affected older female cohorts more strongly

11 See Taubman (1975) for some evidence on the effect of going to such schools on male earnings around age 50

12 While the data are not perfect because there are income eligibility limits, there is no reason to think the percentage above the limits varies by gender

13. The "state-owned" category includes schools such as Bloomsburg It does not include Penn State

14 In conversation, Stafford has indicated that these results are more reliable than earlier ones he summarized in this article based on another sample

15. They also suggest parents chose cities to maximize family income, including that for child labor, which greatly complicates the analysis since parents' earnings may go down even as family income rises.

16. You participate if you have or are actively looking for a job

Appendix
Altruism and Investment in Human Capital

This appendix summarizes the work of Behrman, Pollak, and Taubman (1986). Altruistic parents are those whose utility function depends on their children's consumption or income, as well as the parents' own consumption. In general, an equilibrium allocation of resources between altruistic parents and each child requires that (to the parents) the ratio of the marginal utility of parental consumption and the marginal utility of a child's consumption equal the ratio of the price of each type of consumption. This also means the ratio of the marginal utility of one child's consumption to another child's equal the ratio of their prices of consumption goods.

A child's earnings depend on both his or her genetic endowments and home and other environments. Parents can influence their children's future consumption possibilities by investing time, money, and affection in them. For simplicity, call these investments the home environment, E_H. It is also possible that other environmental influences exist, for example, accidents, particular teachers, own friends, and the institution of governmental policies not expected when parents chose a neighborhood.

Suppose the parent's utility function can be divided into two separable parts: parental consumption and children's earnings. We will concentrate on the latter part. Let us examine the resources (R) devoted just to the child's environment. Let there be just two children, one of each gender. The parameters of the utility help determine the distribution of resources invested in each child, but do not necessarily indicate discrimination.

Parents *discriminate* for or against each child only if the weights they give to each child's earnings are not equal. With this definition, unequal education or unequal income is not necessarily parental discrimination nor is equal education and income a guarantee of parental nondiscrimination.

Behrman, Pollak, and Taubman (1986) studied the interaction of the parents' utility function and the child's human capital function to see how parental discrimination may affect the level of schooling and earnings by gender. For the functional forms they use, they find that whether or not parents discriminate depends solely on the shape of the parents' utility function. Their empirical work suggests no favoritism towards males.

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The Deteriorating Economic Circumstances of Children

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Since Samuel Preston raised the issue in his 1984 presidential address to the Population Association of America (Preston 1984), there has been heated debate over whether children are receiving less than their share of public resources. Preston argued that more and more of our public resources are being directed toward the elderly, while a smaller and smaller share is going to children. He pointed to public spending on Social Security and Medicare, which has risen rapidly, in contrast to spending on welfare and education, which has stagnated or fallen. More recently, we have again focused on the plight of children, particularly those in single-parent households. To some, the current plight of many of our children is a time bomb; we are seen as leaving to the next generation a legacy of unproductive, poorly educated children, ill-equipped to function in an increasingly demanding labor market. While this unequal treatment is not technically discrimination, it has similar deleterious effects.

In this paper, I contribute some facts and draw some conclusions from this debate. I look at the economic situation of children and the elderly and how they have changed over time. Next I describe how public resources have been allocated to these two groups. Then I explore the likely effects of insufficient resources for children, and why there is such disparity between our treatment of the young and our treatment of the old. Finally, I present two proposals for increasing our investment in children.

Facts About Children and the Elderly

First, let me describe these two populations:

Children: Children 18 and under in the United States are increasingly nonwhite and increasingly likely to live in single-parent families or in families in which both parents work. In 1987, a quarter of all children were nonwhite and nearly a quarter—over 23 percent—lived in single-parent families. The picture is starker for nonwhites: nearly 50 percent live in families headed by a woman. These proportions have doubled in 20 years and are likely to continue to grow. Because almost two of three new marriages dissolve and a quarter of all births are out of wedlock, it is estimated that almost 60 percent of all children and 90 percent of black children will spend some time in a single-parent household (Levitan, Mangum, and Pines 1989, p. 6). For children born in 1980, the predictions are even worse. Seventy percent of white children and 94 percent of black children can expect to spend some time in a single-parent household—31 percent of their childhood for whites but nearly 60 percent for blacks (U.S. House of Representatives 1989, pp. 832-833).

Two-parent families in which there are two earners are also a growing trend. In 1983, only 41 percent of two-parent families had a mother who stayed at home, compared to 62 percent 20 years earlier. The increase is greatest among women with preschool-age children (Haveman et al. 1988).

The elderly: The elderly are surviving longer. As a result, the proportion of our population that is elderly has been growing, especially the proportion aged 75 and older. And, they are less likely to be widowed than in 1970. Like children, the elderly have changed their living arrangements over time. They used to live in other people's households, especially those of their children. Now they are much more likely to be living alone or with a spouse (U.S. Bureau of the Census 1989). In 1987, 12 percent of the population were aged 65 or older. Of these, 16 percent of the men and 41 percent of the women were living alone. Most, 53 percent, were living in married-couple households, but this is more true for men than for women.

To compare the economic status of these two groups, we look at poverty rates (see table 1 and figure 1). Poverty rates tell us the proportion of

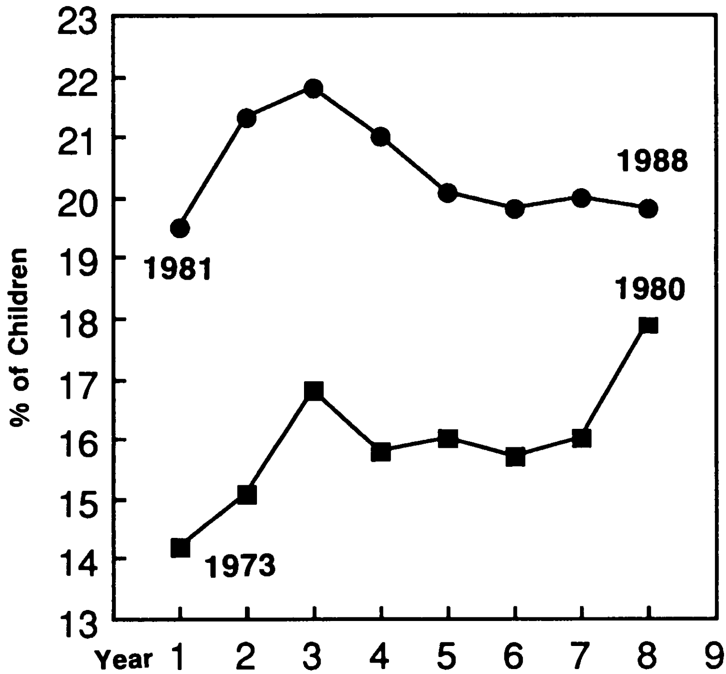
Table 1
The Trends in Poverty: Among Children by Family Type and Race and Among the Elderly, by Race

	Percentages in Poverty				
	1949	1959	1969	1979	1987
All persons		22.4	12.1	11.7	13.5
All children	47.6	26.1	15.6	17.1	20.6
All elderly	60.2	35.2	26.0	15.2	12.2
Children					
In white, non-Hispanic families	41.2	18.8	10.4	11.7	15.0
Husband-wife families	39.3	16.9	7.7	7.8	9.1
Female-headed families	73.1	57.7	44.0	41.3	44.8
In black, non-Hispanic families	87.0	63.3	41.1	36.1	45.1
Husband-wife families	85.7	57.9	29.0	19.7	16.7
Female-headed families	93.4	84.4	67.9	61.2	66.8
In Hispanic families	73.0	53.3	33.3	28.3	39.3
Husband-wife families	71.6	51.3	28.8	22.5	
Female-headed families	92.4	74.3	64.3	62.0	
Elderly	60.2	35.2	26.0	15.2	12.2
White					
Men	52.8	30.1	20.1	8.6	6.8
Women	67.3	36.4	30.4	15.8	12.5
Black					
Men	86.4	65.2	43.7	26.5	24.6
Women	92.3	64.9	50.0	35.3	40.2

SOURCES Danziger (1989b) Computations for 1949-1979 by Sheldon Danziger from computer tapes of the 1950, 1960, 1970, and 1980 Censuses of Population, 1987 data from U S Bureau of the Census, Current Population Reports, *Poverty in the United States*, Series P-60, No 163 (Washington, D C U S Government Printing Office, 1987)

NOTE For 1949-1979, children 0-14 years of age, for 1987, children 0-18

Figure 1
Child Poverty Rate



SOURCE. Danziger (1989a).
REAGAN YEARS, 1981–1988, 20.41% avg.
PRE-REAGAN YEARS, 1973–1980, 15.94% avg

a population that falls below an arbitrary income level defined by the Census Bureau as the poverty line. This poverty line varies by household size; it is based on income, which includes cash transfers but not in-kind transfers such as food stamps, subsidized housing, or medical assistance.

The poverty rate for the elderly has fallen substantially in the last five decades, especially in the last two. In 1969, 26 percent of the elderly were poor. In 1987, 12 percent of the elderly were poor, compared to a poverty rate of 13.5 percent for the population as a whole.

The poverty rate among children declined for most of this time but started to rise 20 years ago, and since 1974 it has exceeded that of the elderly. In fact, as can be seen in figure 1, during the Reagan years the child poverty rate fluctuated around 20 percent, compared to about 16 percent in the eight preceding years. This means that one in every five children was poor. In recent years, children have been the largest group in the poverty population; about 40 percent of all the poor are children (Danziger 1989a, p. 6).

We must remember, however, that although the elderly as a group are doing well, and children as a group are falling behind, there remain many among the elderly who have very low incomes (for example, single elderly black women). Moreover, among children, some groups have far more poverty than others. In 1985, for example, nearly 65 percent of children who lived in Hispanic and black families headed by a single parent were poor, while only 8.3 percent of white children in two-parent families could be classified as poor (Smolensky, Danziger, and Gottschalk 1988, p. 40).

Having established that children as a group are more likely to be poor than the old, let us look at the sources of support for the two groups. First we look at those aspects of the economy and government spending that are designed to benefit all children, such as the earnings of family heads and education, and then those designed to reach all of the elderly, such as Social Security. Then we examine those programs that help the needy: for children, Aid to Families with Dependent Children, Medicaid, and food stamps; for the elderly, Supplemental Security Income, Medicaid, and food stamps.

Comparing Sources of Support for the Two Groups

Earnings vs. Social Security

The real earnings of the median worker declined between 1970 and 1989 (Smolensky, Danziger, and Gottschalk 1988, pp. 42-44). In fact, the exact year the decline began was 1973, the year of the first OPEC oil crisis, which set off lines at gas stations, inflation, and a major recession. Grown-up children from the baby boom entered the labor force largely during this period and were particularly hard hit by the poor economic conditions. At the same time, mean social security benefits continued to increase relative to the median earnings of males. These benefits are available to retired members of the workforce 62 and over and their families. Some economists attribute the decline in poverty among the elderly and its increase among children to this pattern of mean earnings of prime-age males and social security.[1] The 1972 Social Security Amendments increased benefits by 20 percent and introduced an automatic indexing of benefits to "keep pace with inflation," at a time when wages of men were not keeping up with inflation. Earnings of women increased but were still lower than men's and, as mentioned earlier, the number of children living with only one parent has been rising. Average benefits per retired worker increased by 46 percent between 1973 and 1984. Total federal expenditures per elderly person in 1985 real dollars went from $5,500 in 1971 to more than $9,000 in 1985, an increase of 65 percent in 14 years. Added to this is the increase in the standard deduction for the elderly as well. Real earnings dropped by 12 percent for men 35-44 from 1973 to 1986, by half that for men 45-55, and by more than 20 percent for men 25-34 who are high school graduates. Low wage jobs have increased while middle wage ones decreased.

Education

Public education is our major public investment in children. The percentage of federal budget outlays spent on education decreased from 5.9 percent in 1980 to 4.1 percent in 1985 (U.S. Bureau of the Census 1989). Enrollments stayed at roughly the same level over this period.

The federal share of expenditures on public primary and secondary education declined from 9 to 6 percent or by one-third, while real expenditures per pupil increased slightly—by 2.5 percent per year from 1980 to 1985. This is an improvement over the 1970s, when per pupil expenditures increased by 2.2 percent per annum even though enrollments in public schools declined by five million, or by more than 10 percent. Over the last three decades, the proportion of classroom teachers to all staff declined from 65 percent to 54 percent. Thus more educational dollars now go to noninstructional personnel (bus drivers, security officers) who only indirectly influence our children's education.

Another indication of the lessening commitment to invest in children's education is the pay scale for primary and secondary teachers. The ratio of average starting salaries of teachers relative to liberal arts graduates declined about 3 percent from 1975 to 1987, when it stood at 85 percent (U.S. Bureau of the Census 1989). The ratio of the average salary of teachers to net earnings of physicians stayed about the same over this period—at about 22 percent, or $25,000 versus $112,800 in 1986. The status of physicians is also much higher than that of teachers. (By the prestige scale of the National Opinion Research Center [NORC], a high school teacher's rating is 63, a physician's 82 [and a university professor's, 78].) It should come as little surprise that there is a big difference in the college entrance examination scores of pre-med students and education majors. The achievement test scores of students planning on teaching are relatively low and have dropped more rapidly than among the overall population of entering students. And the best students—in terms of entrance exam scores—are less likely to become teachers (Vance and Schlechty 1982).

We turn now to the relationship between education and poverty. Level of education and poverty are closely related. Children in poor families are three times more likely to drop out of high school than are children in more prosperous families. Each year a child lives in poverty reduces his or her probability of graduation by nearly 1 percent (Haveman et al. 1988). The high school dropout rate is higher today than it was 20 years ago. About 750,000 students per year drop out (Congressional Research Service 1988b). The high school graduation rate differs by race and income. As of 1986, 83 percent of whites aged 18-24, 76 percent of blacks, but only 60 percent of Hispanics had graduated from high school. Enrollment in college among this age group follows a similar pattern—it is highest for whites, next highest for blacks, and lowest for Hispanics (18 percent). In general, rates of college enrollment are down, at least for nonwhites, since 1976.

According to a report of the Congressional Research Service (1988a), children in single-parent families and those living in poverty have, on average, some degree of "depressed educational attainment." School policies (or the absence of special policies) evidently play a role in influencing this outcome. Children living in single-parent households, especially those headed by mothers, have lower educational attainment, whether measured by years completed, grades, test scores, or behavior in school. The educational difference, on average, between those who ever lived in a single-parent household and those who had never lived in a single-parent household is 1.1 years. This may not just reflect family structure: single parents tend to have lower education levels and lower financial resources than parents in two-parent families. As noted previously, over half of children in one-parent families live in poverty.

In an ongoing study that I am conducting with Robert Haveman at the University of Wisconsin, we are looking at factors that influence the probability of high school completion, using data from the Michigan Panel Study of Income Dynamics. We are following children who were between the ages of zero and 6 in 1968 to the present. Early findings are the following. (1) Children who grow up in a single-parent family headed by a woman who has not graduated from high school have only a 69 percent probability of graduating from high school. (2) If the single parent graduated from high school, the probability of the child graduating from high school increases by 9 percent. (And, as expected, if either parent attended college the probability of graduation is further increased.) (3) Children whose parents separate have lower school attainment and children whose family structure does not change.

There is evidence that schools play a role in determining these relatively poor educational outcomes. One study has noted that when families are going through a transition, children tend to be absent, late, truant, and aggressive. They are also likely to change schools. Evidence suggests that schools and teachers respond to these problems in ways that "are more negative than warranted," says the Consortium for the Study of School Needs of Children from One-Parent Families. According to a study by Hetherington, Camara, and Featherman (1983), schools do not give children in such families the benefit of the doubt. One piece of evidence consistent with this conclusion is that living in single-parent families causes children to get lower grades than their achievement test scores warrant (Hetherington, Camara, and Featherman 1983, p. 283). Schools and teachers also tend not to schedule conferences, assemblies, and other social activities when working parents can attend; nor do they provide transportation so that children whose parents cannot chauffeur them can attend various extracurricular events. There is also evidence that school staffs have negative expectations of children of single parents and of these parents (Clay 1981, pp. 29-32, 49-55). There is a tendency to place children from low-income families in nonacademic tracks. This both limits their options to future education and concentrates such children together.

Health Care

Another area of public investment is health care, particularly financing in the form of public insurance. Most health insurance for children is private and most is based on a parent's insurance at his or her place of employment. The percentage of children without health insurance has been going up: from 13 percent in 1980 to 16 percent in 1986 (U.S. Bureau of the Census 1989). Children make up about a third of the uninsured.

In 1978, per capita spending by government on health care was 15.6 times as high for the elderly as for children (Meyer and Moon 1988). And in 1986, about 75 percent of the federal government expenditures on health care went to the elderly, compared to 5 percent to children. Big differences in utilization would occur even without public spending—but they increased with the introduction of Medicare and Medicaid in 1966. Medicare is a federal program that provides health insurance or financing of medical care for those aged 65 or older, some disabled persons, and those with end-stage renal disease. Medicaid is a joint federal/state health insurance program for certain categories of low-income persons. Over 11 million children had no health insurance in 1987 (Short, Monheit, and Beauregard 1989). Nearly all the elderly are covered by health insurance. Medicare, which is tied to social security, covers virtually all the elderly, although there are gaps in coverage. Medicaid, which was designed to provide health protection for specified groups of the poor, should cover the elderly poor. Only about one-third of the elderly poor are beneficiaries of Medicaid, however.

Children's health coverage primarily depends on whether they have a parent who works in a job that offers health insurance coverage or whether their family is eligible for AFDC and hence Medicaid. This eligibility varies from state to state, although since 1986 all children younger than age 7 who live in families with incomes below the poverty line may be covered at the state's option. Many children who live in families with incomes as low as 30 to 50 percent of the poverty line do not have any coverage for medical care.

As a result, many do not obtain even minimal health services. It is generally assumed that children receive free vaccinations. Yet fewer children 1-4 are vaccinated against measles, rubella, DPT (diptheria-tetanus-pertussis), polio, or mumps today than in the period 1976-1983 (see table 2). White children are more likely to be vaccinated for each of these diseases than are nonwhites. In fact, according to the Division of Immunization of the Centers for Disease Control, less than half of nonwhite children ages 1-4 are vaccinated against any of these diseases (National Center for Health Statistics 1988, p. 80).

Discrimination or inequities toward children begins early—with inadequate prenatal care of mothers. According to a study by the U.S. General Accounting Office (1987), nearly two-thirds of Medicaid recipients and uninsured women reported insufficient prenatal care. Nearly all (84 percent) uninsured women who received insufficient care cited not enough money as the most important barrier to receipt of care; among the Medicaid group, one-third cited no transportation as the most important barrier. Among women who applied for eligibility when pregnant, about a fifth had difficulties that kept them from receiving sufficient care. Difficulties included long delays in receiving notification

Table 2
Changes in Health Status As Measured by Immunizations and Life Expectancy

	1970	1974	1979	1985	Percent change 74-85
Percentage of immunized children ages 1-4					
Measles					
All	57.2	64.5	63.5	60.8	-6
White	60.4	66.8	66.2	63.6	-5
Nonwhite	41.9	53.1	51.2	48.8	-8
Rubella					
All	37.2	59.8	62.7	58.9	-1.5
White	38.3	61.0	64.7	61.6	+.1
Nonwhite	31.8	53.6	53.7	47.7	-11
DPT					
All	76.1	73.9	65.4	64.9	-12
White	79.7	76.8	69.0	68.7	-10.5
Nonwhite	58.8	59.6	49.2	48.7	-18
Polio					
All	77.5	63.1	59.1	55.3	-12.4
White	80.5	66.7	63.6	58.9	-12
Nonwhite	62.7	45.0	38.9	40.1	+11
Life expectancy (in years)					
Birth					
All		72.0	73.9	74.7	+3.7
Male		68.2	70.0	71.2	+4.4
Female		75.9	77.8	78.2	+3.0
65+					
All		15.6	16.7	16.8	+7.7
Male		13.4	14.3	14.6	+9.0
Female		17.5	18.7	18.6	+6.3

SOURCE National Center for Health Statistics, various years of eligibility and being unable to get a provider to see them. Physician participation rates in Medicaid vary from 60 percent in the South to 69 percent in the North Central region (Mitchell and Schurman 1984, pp. 1026-1037). (These low rates reflect relatively low rates of Medicaid reimbursement.)

One more contrast should be made in the role of the public sector in subsidizing health insurance. The purchase of private health insurance is heavily subsidized because the employer contribution to the premium is excluded from the worker's taxable income. This subsidy is greater, the greater one's marginal tax bracket. Furthermore, not all jobs offer health insurance. Low-paying, part-time, and retail and service jobs are less likely to be covered than well-paying jobs. Full-time workers in firms with 100 or more employees are almost always covered. The value of the tax exclusions has been estimated to be about $50 billion in foregone revenue (as of 1986), which is about twice the federal outlays for Medicaid. The tax exclusions may well have increased the coverage of employees, leading to increased demand, higher prices, and distortion of the location of medical care facilities to higher-income areas. All of these changes have negative consequences for access of the poor, including children.

Aid to the Needy

A number of government programs are designed specifically to provide for the needy. How are they distributed between children and the elderly? Is the beneficent hand of government more open to the old? That appears to be the case (see table 3 and figure 2).

All of the poor can participate in the food stamp program, a program that enables them to purchase food at very low cost. The old and young are served equally by this program, although some studies have shown that the old are less likely to make use of it. In addition, the principal benefit for poor children is Aid to Families with Dependent Children (AFDC), commonly known as welfare. This program is directed at children in single-parent families and, since 1988, at children in two-parent families if the breadwinner is unemployed. In 1986, the average AFDC payment was only 40 percent of the poverty line, and only 59 percent of poor children received the benefit (U.S. House of Representatives 1989).

Table 3
Trends in Federal Spending for Social Programs
(millions of 1985 dollars)

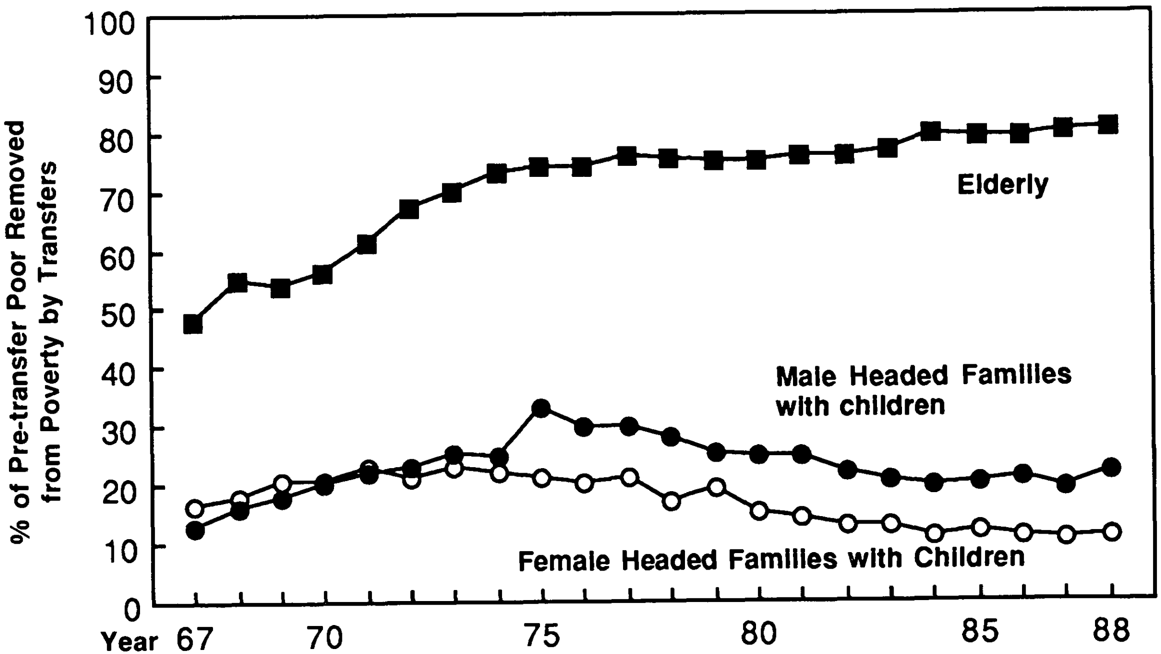
	1967	1973	1979	1985	Percent change 73-85
AFDC	8,103	13,706	9,233	8,625	-37
Medicaid	11,783	28,964	36,132	41,719	+44
Medicare	9,448	20,924	40,894	69,649	+233
Social Security	63,420	111,507	148,988	186,432	+67
Education grants for disadvantaged		5,497	5,768	5,641	+2.6

SOURCE Haveman (1988, Table A 26)

Compare this with the principal benefit for the low income elderly, Supplemental Security Income (SSI). In 1974, Supplemental Security Income was implemented on a federal level. Both cash assistance and eligibility for Medicaid were determined by national standards to cover the elderly and disabled. In 1986, an elderly couple receiving SSI and food stamps had an income that was greater than 80 percent of the poverty line, and almost all of the elderly poor received some cash benefits (Smolensky, Danziger, and Gottschalk 1988).

Most of the elderly also receive Social Security benefits. As I mentioned earlier these payments have continued to increase relative to the median earnings of men, the poverty line, and AFDC payments. According to recent data (U.S. House of Representatives 1989), our transfer policies including both welfare (cash and noncash) and social insurance remove from poverty 21.2 percent of two-parent families with children, 23 percent of poor sole-parent families with children, and 80 percent of poor elderly families.

Figure 2
Antipoverty Effects of Cash Transfers
Percent Removed from Poverty, 1967–1988



SOURCE. 1967 to 1985 data from Danziger (1989a).

Average cash transfers to families with children who are poor before receiving any assistance from government declined from 1973 to 1984, whereas average cash transfers to the elderly poor increased and came to more than double the average payments to families with children ($7,322 to the elderly poor versus $2,946 for two-parent families and $3,276 for female-headed families in 1984). The result, according to Danziger (1989a), is that 13 percent of white, 41 percent of black, and 37 percent of Hispanic children remained poor in 1985, either because they and their families received no transfers or because the transfers were not large enough to enable them to escape poverty. The small sizes of transfers to families with children reflect in part the significant changes made during the Reagan era to reduce eligibility for AFDC. These changes were targeted on the working poor, making it extremely difficult for them to supplement earnings with welfare. Cash benefits also declined in that they failed to keep up with inflation. Among the elderly, 13 percent remained poor after receiving transfers. Many of these are widows. One reason for their low incomes is that social security benefits fall by one-third when a husband dies. The size of the reported increase in poverty, however, is somewhat arbitrary, since the poverty line falls by 20 percent as family size shrinks from two persons to one, whereas benefits are cut 33 percent. If the poverty-line adjustment was consistent with the social security adjustment, 14 percent of white elderly widows and 36 percent of black elderly widows would have incomes below the poverty line (Smolensky, Danziger, and Gottschalk 1988, p. 36). Both couples and widows who have private pensions are far less likely to become poor than those without pensions. Poverty is not necessarily a permanent state, however, even for widows. A recent study by Burkhauser and Duncan using the Retirement History Survey found that, on average, most recently retired persons in poverty in any year were not in poverty the year before or the year after (1988, p. 75).

Effects of Underinvestment in Children

Perhaps the most crucial implication of the reduced commitment to children is the reduction in human capital. Not only will the life chances of children be lowered, so will our national income. Employers look at human capital—both educational attainment and health—in making employment decisions. Years of schooling is the single most important factor. (Differences in formal education account for 38 percent of the wage gap between black men and white men [Corcoran and Duncan 1979].) Simple tabulations from the Census suggest that male high school dropouts earn on average about 78 percent as much as those who graduate from high school but don't continue with their schooling. Male dropouts earn 56 percent as much as those who go to college. Women who drop out of high school earn 75 percent and 52 percent as much as women who graduate high school and women who attend college. High school dropouts are also less likely to be employed than graduates. In 1985, for example, 76 percent of men of prime working ages who did not graduate from high school were in the labor force, compared to 90 percent of those who graduated from high school but had no additional education. Among those in the labor force, dropouts are also more likely to be unemployed (U.S. Department of Labor 1986).

The effects of lack of investment in medical care and health insurance are profound. Health influences productivity, first in the school and later at home and/or in the workplace. Poor health limits activities, cuts back days of productive activity at school or work, and lowers energy and concentration. Health is determined by a variety of factors including sanitation, shelter, and nutritious food. It is also influenced by hereditary factors, life style, and medical care. Health is difficult to measure accurately. One commonly used indicator is life expectancy. If we use it to compare the elderly versus children, we find the elderly have been doing better in recent years. Between 1974 and 1985, life expectancy at age 65 increased by 8 percent compared to life expectancy at birth, which increased by only 4 percent (see table 2). Large strides have been made in controlling at least two of the diseases that smite the elderly: heart disease and cerebrovascular disease. The death rate from these two illnesses was cut in half between 1970 and 1984 (National Center for Health Statistics 1988). At the same time, death rates for homicide and heart disease increased for children under 15. Infant mortality rates, another commonly used measure of health, have been stagnant in the

1980s after a period of substantial decline in the 1970s. Early and adequate prenatal care prevents stillbirths and miscarriages, as well as low birth weight among babies which is a signal of poor health and sometimes lifetime physical and mental disabilities. According to a GAO report (1987) babies born to mothers who receive no prenatal care are three times more likely to be of low birth weight. The report cites an Oregon study which found that insufficient care was associated with a two to five times greater probability of low birth weight and infant mortality.

In a study published in 1982, van der Gaag and I looked at determinants of child health. We found that if the mother in a household is employed, a child's health tends to be poorer. The negative association was higher for part-time work than for full-time work, perhaps reflecting different (better) child-care arrangements for full-time workers. We found that mothers' schooling is positively associated with health. So is parents' marital status. Children of never-married women had significantly poorer health and children of divorced mothers somewhat worse health than children of married parents. Being nonwhite was also negatively associated with health.

Medical care can intervene in some cases of ill health, both as a preventive and as a curative factor. Access to and use of medical care can therefore be an important determinant of health. The use of medical care is determined by the usual factors that apply to demand, but in the case of medical care there is an important intervening factor—namely, health insurance. Health insurance lowers the price of medical care and hence increases utilization.

Poor children who do not have health insurance use less medical care than poor children with coverage or children of higher-income families. Having a comprehensive and generous health insurance plan has a greater effect on the use of medical care by poor children than by other children. Children with Medicaid tend to have as many general check-ups and immunizations as other insured children, though among children with health problems use of health services is still somewhat below that of children in higher-income families (U.S. Congress 1988, pp. 17-18).

The failure to invest adequately in the human capital of all of our children will mean that the United States will have lower productivity, be less competitive in the international market, and have a lower national income. Recall that more and more of our children are growing up with fewer parental resources—less time, only one parent, stress due to separations, etc. Instead of compensating for this loss, we seem to be making matters worse. Schools have too few resources. We do not attract enough bright students to teaching. Teachers have little or no training on how to deal with children who are facing the stresses of separation, moves, and low income. Seventeen-year-olds in 1986 scored lower (5 percent) on science proficiency tests than their counterparts 20 years ago. And 13-year-old children in the United States score below children in other developed countries in math and science (National Center for Education Statistics 1989). Many children have no health insurance and do not receive the medical care that they need. Many children who are born with low birth weight never fully recover. Many children do not receive services to prevent problems that lower their productivity at school and at work. Lack of preventive services and lower nutrition result in less productive workers. Additional social problems may develop—especially if income inequality increases as a result of the lack of investment in some of our children. Not only are individuals less able to compete, there are ramifications for the entire economy. Lower levels of human capital for some are likely to increase inequality, with its demoralizing and destabilizing effects on a racially diverse society.

How Did We Get Here?

Why has this disparity between our treatment of the young and our treatment of the old developed? One explanation is that somehow the U.S. public believes that social insurance—Social Security, for example—has been earned and paid for by contributions made while working, and thus it is deserved. (This is not the case—Social Security payments are transfers from today's workforce to the retired—but the perception persists.) Because benefits to single parents—welfare—are not based on earnings but rather are based on "need," they are thought by many to be payments that support lazy people who choose not to work. Children are heavily dependent on the earnings and health insurance of their parents. As earnings growth declines, as more and more babies are born to parents who belong to minority groups, and as children spend more and more time in single-parent rather than two-parent households, the well-being of children declines.

Children and their parents are also losing political power. The elderly have increased in number and will continue to increase as a proportion of our population. They vote more than other age groups and belong to well-organized lobbying groups such as the AARP. They have, therefore, become a powerful political force, or at least are perceived as a potentially major force. In addition, some of the middle-aged population support policies for the elderly both because it is a way to shift part of the burden of caring for their parents away from themselves and onto the public sector, and because they expect to share in the benefits when they retire. During this century, the proportion of U.S. citizens who agreed that children should accept financial responsibility for their old parents dropped from 50 percent in the 1950s to 10 percent in the 1970s (Crystal 1982). A similar change in view is taking place concerning who should take care of the elderly. It is no longer viewed as the responsibility of the children (usually daughters), since most women work (Crystal 1982).

At the other end of the age spectrum, children can't vote and are a declining percentage of the population. The middle-aged population will never again be children, and fewer older adults are grandparents, who may feel a greater stake in the future of the young. An increasing percentage of adults are childless, which decreases the bloc of voters who would naturally support policies toward children. And children are more likely to belong to minority groups, toward whom some of the majority population may feel less commitment. Parents are still expected to take financial responsibility for their children, and policies to require that they do so are being pursued with increased vigor (enforcement of the laws obligating absent parents to pay child support, for example). These factors plus the stagnation in real earnings, which has led to a real decline in living standards of children, particularly those who do not live with parents who are both earners, are putting our future generations at risk.

What Might Be Done?

It is clear that we are investing less in our nation's children and that these children have, on average, fewer private resources than was the case in the past. We have been allocating more resources to the elderly as a group, although the rate of increase in Social Security benefits should be curbed by changes made in this decade. All of this argues for some fundamental changes in public investments or allocation of resources.

In terms of investment, the nation seems to have put our troubled education system and child care on its agenda. We regularly read of the need to attract brighter students to education,[2] and there are several bills in Congress to support child care, so I mention here two ideas that focus on other aspects of the problem—one for health insurance coverage, the other for providing resources to children so they can invest in themselves.

Numerous bills are being considered to extend Medicaid to children not otherwise covered.[3] The 1988 Family Support Act extended Medicaid coverage for 12 months to all who lose eligibility because of increased income or work. But Medicaid reimbursement is low compared to the amount paid by private coverage. This discourages medical practitioners from providing services, forcing Medicaid recipients to use emergency rooms, which are more expensive and do not have the benefit of medical records.

A more comprehensive approach is clearly needed. In order to target children, we should introduce what I like to call Healthy-kid, a program that is federally operated and covers all children below a specified age, say 18. This plan would provide coverage for a specific set of services. For children living in families with income below 1.75 times the poverty line, these services would be provided without cost. For children in higher-income families, there would be income-based copayments; that is, the percentage of each charge paid by families would be higher among higher-income families. Coverage of other services beyond this specific package of services would require cost-sharing by the poor and private insurance or direct payments by the better-off. In other words, the federal government would provide a federal minimum of health insurance coverage for all children. This plan would also cover pregnant women—again with copayments tied to income. The plan would be operated through the Health Care Financing Administration (HCFA), which now runs Medicare. Children could obtain their coverage by signing up with an HMO that has a contract with the HCFA, or they could use services on a fee-for-service basis. The payments to providers would not depend on the child's household income but only on the child's location (and perhaps his or her underlying health status for HMOs). This program should avoid the current disincentives to serve the poor compared to middle- and upper-income families. This insurance or financing may save some money in the long run by decreasing the need for high-cost care such as intensive care for infants with low birth weights. Some of the costs of the program could be financed by taxing the value of health insurance premiums paid by the employer beyond a maximum amount (or cap). The cap could be set at 80 percent of the actuarial value of basic benefits, or the entire value of employer-based premiums could be taxed at 50 percent of the full value.

Alternatively, we could move to provide basic coverage for all citizens. Again, it is only basic services that would be provided, and again, copayments would be tied to income. However, I think we should start with Healthy-kid. By doing so, we will gain some knowledge of the costs of running a nationwide program that covers basic services only, for everyone, regardless of income.

My second proposal is to use the Social Security Trust Fund as a way to increase an individual's capacities. The Social Security system could serve as collateral for loans to young people to enable them to increase their productivity. Thus one young adult might take a loan from the Social Security system to finance a college education or a graduate degree. Another might finance an apprenticeship. These loans would be available to individuals 18 or over only for approved investments. A new office in the local Social Security office would review the application. Payment of the proceeds of the loan would be made directly to a college, apprenticeship program, etc. Defaulting the loan would reduce the defaulter's future Social Security pension benefits, but at a rate that would not reduce a person's income below 85 percent of the poverty line.

This approach would provide equality of opportunity, making youth less dependent upon the fortunes of their parents. It would improve the productivity of young adults and add to their income, the national income, and the Social Security Trust Fund. It also carries some risk for the individual who borrows, since nonrepayment hurts his/her own economic condition in retirement.

Finally, let me just briefly state how we might change things at the other end of the age spectrum. We can turn Social Security into a minimum standard benefit sufficient to keep the elderly out of poverty. We would expect those who want larger incomes in their old age to save during their working years, perhaps by putting their money in special accounts that provide tax advantages. Of course, such a change would have to be phased in gradually over time.

I am not advocating depriving the old of their hard-won security. There are numerous other ways to finance increased resources to the young. What I am proposing is that we reallocate our spending so that those who are most needy and who are needed by all of us—our children--have the opportunity to become productive citizens.

NOTES

1 According to a report of the U S. House of Representatives (1989), 28 percent of the increase in poverty among families with children was due to declines in real market income over the years 1979-1987, 46 percent to declines in means-tested programs, 14 percent to changes in social insurance programs, and 3 percent to federal tax changes (p 977)

2. For education, one of the prevailing views is that we need to find a way to create incentives for bright promising teachers to enter the profession, for them to be appropriately rewarded, and for information to be communicated on programs and approaches that are successful Some resources for experimental schools would also be useful Privatization and/or allowing parents freedom of choice in selecting schools is another current popular option

3 For example, Lloyd Bentsen, chair of the Senate Finance Committee, has introduced a bill to provide Medicaid coverage to all pregnant women and children up to age 6 in families with incomes up to 1 8 times the poverty line President Bush has suggested extending coverage to women and infants living in families with incomes up to 1 3 times the poverty line and to finance immunizations for all children receiving food stamps

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Underclass and Overclass

Race, Class, and Economic Inequality in the Managerial Age

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> Managers tend to identify the welfare of mankind as a whole with their own interests and the salvation of mankind with their assuming control of society.
>
> James Burnham
> *The Managerial Revolution,*
> 1941, p. 193.

The New Overclass

Contentious disputes over the underclass concept and the underclass "problem" in the United States have overlooked the necessity of examination of the nature of the *overclass.* After all, there cannot be one without the other. The purpose of this discussion is to illuminate the comparatively uncharted geography of the elite who dominate society from above as a complement to the conventional inquiry into the lifestyles of those who live at the bottom of modern America. The full range of forces impinging on the lives of the underclass cannot be understood, anyway, without a careful look at the motives and methods of the overclass.

It may seem odd but imagine, as the entry point to the investigation of America's overclass, that we are in twelfth-century England. Follow David Lebedoff's description of the marital selection process among the serf population on a feudal demesne:

> It was time for Thomas to get married. He was almost eighteen, his father had died, and the patch of land was now his. He needed a wife

> to help with the work, to cook and sew and bear children. He needed a wife as much as he needed the sun and the rain and the protection of his feudal lord. He wanted companionship, too, and sex. These needs were urgent and could not be postponed.
>
> The problem was finding a bride. In Thomas' limited world there were three single women of marriageable age. One was sickly, one was strong, and one was beautiful. He married the one who was strong. There was really no other choice. The sickly woman could not work his poor land, and the beautiful one did not want to. She had other alternatives.
>
> Thomas' bride was named Katherine. The couple got on very well; neither Thomas nor Katherine ever wondered who was smarter. Intelligence was not a factor in marital selection. There was no such thing as an IQ test. No one even suspected that intelligence could be measured. There would have been no point to such measurement. There was no social mobility. A person was born to a certain role and stayed there. The great majority of people spent their lives on the land in harsh drudgery.
>
> As it happened, Katherine was much the brighter of the two. By today's measurement, Thomas had an IQ of 105, and Katherine, 147. Which means that Thomas' intelligence was very near average (100) and Katherine's close to genius. Neither suspected this disparity. Both were illiterate. Almost everyone was. The conditions of their lives did not recognize, let alone reward, Katherine's special gifts.
>
> Thomas and Katherine lived in England in the twelfth century, but the circumstances of their union would have been much the same in Italy or Russia or China, in the Middle Ages or the Renaissance. From the dawn of time until the eighteenth century, the process of marital selection was very much the same. Spouses were chosen from the very small pool of those who happened to live nearby. They were chosen without regard to, and without any way of knowing, what their general intelligence might be.[1]

The consequence, according to Lebedoff, was the random distribution of measured intelligence across the population. Measured intelligence and social status were two separate matters in the Middle Ages:

> By and large intelligence had nothing to do with one's station in life. A genius comparable to Einstein could die illiterate after a lifetime of serfdom in the fields. No one knew of his ability, and no one would have cared.[2]

Lebedoff contends that three factors have altered the world of Katherine and Thomas, a world where measured or "general" intelligence was a matter of peripheral importance, to our current condition where measured intelligence has become a matter of central importance. First, there is greater geographic and social mobility, exposing people to a much wider range of possible marital partners. Second, virtually universal education in the Western world (and in Japan) has had the following perverse effect: "If everyone can read and write, everyone can be graded and tested. Children can be told precisely how smart they are supposed to be; and that information, accepted by both the child and society, helps determine the choice of spouse." Third, and "most important," is the fact "that, today, intellectual ability is rewarded."[3] Says Lebedoff:

> Now, by and large, people can rise to the level that their talent permits. Those with high grades go on to college and to higher-status jobs. Those with lower scores leave school earlier and take other kinds of jobs. The son of a cobbler is no longer destined always to be a cobbler himself. People still marry within their social and economic class, but membership in such classes has come to depend more on measurable intelligence and less on the circumstances of birth. People of high I.Q. marry other people of high I.Q. no matter how disparate their parentage may be. Equality of opportunity has led to people being socially and economically stratified by virtue of their measured intelligence.[4]

An extreme vision of a society stratified on the basis of measured intelligence has been advanced by Harvard social psychologist Richard Hernnstein, who argued in the early 1970s for a hereditarian foundation to an emerging IQ meritocracy:

> . . . if . . . one grants the possibility that mental abilities do vary at all genetically, then a powerful and surprising conclusion follows—namely, that society may segregate people into social groupings or classes based at least partly on biology. For if mental capacity is to any degree inherited, and if social standing reflects mental capacity, then social standing must be a mirror, albeit an imperfect one, of inherited ability. Moreover, as society equalizes the opportunities for advancement, which is to say as society becomes "fairer," by the ordinary standards of fairness, it will tend more and more to base its social distinctions on genetic grounds. In other words, if parents no longer can pass social and economic

> advantages on to their children—let us say, because of taxes and welfare and public housing and uniformly excellent public schools—they will instead contribute to their children's success and failure only by their genetic legacy.[5]

Both Lebedoff and Hernnstein are wrong in their acceptance of the "equal opportunity" myth. There is substantial evidence that academically high-achieving youths tend to be children of academically high-achieving parents. This is indicative of diminishing interclass mobility, rather than increasing equalization of opportunities, because high-achieving parents are far more able to guarantee quality education for their own children than parents who have been defeated by the educational system.[6]

Nevertheless, Lebedoff and Hernnstein have glimpsed an idealized vision of our unfolding future—Lebedoff as a brutal critic and Hernnstein as an unabashed enthusiast—in which putative mental capacity dictates social class position. Both of them have grasped the great transition that is international in character—the rise to dominance of intellectuals, the intelligentsia, and the technocrats.

Recent events in Eastern Europe, suggestive of the collapse of socialism and the victory of the Western way, obscure the continued preeminence there, as well, of the intellectuals, intelligentsia, and the technocrats. For the movement toward democraticization and the dismantling of a totalitarian apparatus means a switch from the control of one group of social managers predisposed toward political and economic bureaucratic authoritarianism, to another group, predisposed toward electoral politics and the rejuvenation of private enterprise.[7]

What Lebedoff and Hernnstein sense is the international convergence toward a class structure where the dominant class—the modern overclass—possesses vast ideological fluidity. The class structure has at its apex the managerial class, comprised of those with putative mental capacity and putative ability to manage, i.e., design and execute social control strategies and tactics. The managerial class analyzes, constructs, and administers social policy. The cultural manifestation of their influence over contemporary America is evident in the lifestyles of the "Yuppies."[8]

Class analytical explorations of social stratification patterns have been ambiguous with respect to the position of those persons holding professional positions. In Marxist class-theoretic studies, professional workers typically either fold into the working class or are treated as agents of capital.[9]

It is, however, more fruitful to view the professionals as forming an independent social class situated apart from labor proper and capital. Not only do they form a separate social class, but they form a social class driven toward its own destiny. Only by recognizing the distinctiveness of the managerial class can we see the rich outlines of the emergency of the new social order. The importance of mental capacity and the ability to manage has overtaken the authority of wealth and finance.[10] Capitalism winds down and the managerial estate winds up.

The Genesis of the Managerial Class

In the United States, the origins of the managerial class can be traced to the Progressive Era at the turn of the century. Development of a cadre of workers ("social" workers in the broadest sense) to minister to the perceived needs of the working class was the incubator for the development of the professions. The process was sponsored by corporate America.[11] The managerial class in its infancy was the progeny of American capital.

Consequently, this new class was dependent on corporate capital and, necessarily, subservient. Largely coterminous with the middle classes that also harbored an older group of small businessmen—the petty bourgeoisie—the members of the managerial class, even those who were social workers for the working class, espoused a certain attachment to the precepts of rugged individualism.

But the decisive event that changed all this was the Great Depression. An ideological shift took place among the middle classes from individualism to New Dealism—a cry for "relief."[12] The managerial class endorsed an apparent "reform" of capitalism that was in fact a revolution. Of course, it was not a revolution on behalf of the working class, but on behalf of the middle classes themselves.

Here is the starting point of James Burnham's "managerial revolution"—in the crucible of maximal capitalist crisis.[13] Here are the beginnings of the self-conscious commitment to macroeconomic stabilization policy, activist fiscal and monetary policy, and macroeconomic management, bolstered by the gathering of data and the development of national income accounts. Here is where the foundation of the welfare state was established, where the federal government *de facto* took an open hand in the development of a national family policy.

The principle of an unlimited, rather than the formerly limited, terrain for the state became accepted. The extension of the state meant that the welfare state cushioned both the members of the middle and working classes from the exigencies of the capitalist business cycle. But, in addition, the extension of the state meant expanded employment opportunities for the middle class, giving them a dual benefit.

Thus, the managerial class discovered a route for loosening the umbilical cord, which had bound it to corporate capital, through the growth of the public sector. World War II and, thereafter, the Great Society and civil rights movement constituted further bases for still more dramatic expansion. The social programs of the 1960s coupled with civil rights legislation can be construed as a response to race revolt, and the new positions in public sector welfare agencies were obtained disproportionately by black professionals.[14] This was the essential source of growth in the black middle class trumpeted by scholars and journalists in the 1970s.

The combination of the Great Society and civil rights movement took the scope of government beyond the breakthrough achieved by the New Deal. The judiciary, in particular, took on direct involvement in public policymaking, including management of school systems and prison systems.[15] The inherent limitlessness to the managerial state was manifest.

Curing Poverty and Racial Inequality?

Simultaneously, the ideological illusion was fostered that poverty could be abolished by constructive public action. This illusion was consistent with the belief system of the rising managerial class. Their social management mentality led to a presumption that they could solve any problem with research and sound thinking—a certain characteristic "arrogance of the new elite."[16]

Under the passing regime of men of business—the classic capitalist social order—poverty and the social system were blatantly interconnected. Mercantilist thinkers, the heralds of capitalism, were cruelly straightforward in advancing the doctrine of the utility of poverty—the notion that poverty was necessary to extract adequate effort from the laboring classes. Classical political economy, particularly in Ricardo's hands, elaborated a variety of schemes to repress wages in order to keep down costs of production and delay the inevitable approach to the stationary state.

Neoclassical economics' story of wage generation is encapsulated in the labor-leisure choice and human capital theory. Labor-leisure choice means some people with preferences for leisure, in effect, will select lower incomes. In the neoclassicals' preferred world of minimum government interference in market processes, some persons will be "idlers" and, hence, in poverty. But, regardless, if more persons choose to acquire higher levels of human capital and pursue more work, they drive down the returns for everyone potentially, for some categories of jobs, to poverty-level wages.

In Marxist analysis, wage repression was an important avenue to counteract the law of the tendency for the rate of profit to fall. Capitalist society possessed an inherent tendency to produce unemployment, to create a reserve of labor, a tendency driven by the functionality of the reserve. The reserve was necessary to hold back the wage demands of those with work and to make readily available a pool of workers to throw into new lines of activity without disrupting older sectors.

Of course, in principle, one could always engineer a redistribution of income or wealth in such a way that everyone is comfortably above the poverty line. But the mercantilists' blunt logic holds sway. Such a policy would produce a large incentive problem for employers hiring for occupations at the low end of the wage scale. Therefore, poverty could not be eliminated under capitalism.

Although poverty could not be eliminated altogether, poverty could be reallocated by race or by gender. Proponents of *racial* equality—

rather than *general* equality—presumably seek a racial reallocation of poverty so that the proportion of blacks who are poor falls and/or the proportion of whites who are poor rises until the same ratio prevails among both races, e.g., 20 percent of families of each race being in poverty.

But would it always be the same families? William Wilson's big concern in his research on the underclass is the intergenerational transmission of poverty status. He focuses on an underclass that is disproportionately black and that replicates poverty status from generation to generation. Therefore, racial equality for Wilson also must be understood in intergenerational terms.[17]

Suppose we have a population of twelve families; three families are enumerated as black and nine families are enumerated as white. In Year 1, two black families are poor or 67 percent of all black families, while three white families are poor or 33 percent of all white families. A *racially equal* society with respect to poverty status would be one where in Year 2, one out of the three black families (33 percent) would be poor, and it would be the family that was nonpoor in Year 1. And now six out of the nine white families (67 percent) would be poor—again the families that previously were nonpoor. This rotation could continue indefinitely. While this would be a community characterized by perpetual general inequality, it certainly would be a community without racial inequality.

Since poverty could not be eliminated under capitalism, then the previous hypothetical situation reveals one feature of the best an egalitarian might hope for: to distribute exposure to poverty evenly across the population by generations. Of course, one might also hope to reduce poverty's scope to the level necessary for continuation of the system, given that one is willing to leave the social system itself intact or is unwilling to mount an attack upon it.

Both of these egalitarian steps—we might call them steps toward Wilsonian equality where one seeks to mute the effects of poverty while failing to challenge the social system—have been pursued with great timidity, if at all. Identification of the minimum incidence of poverty necessary to capitalism has proved to be a virtually intractable proposition. And those groups with the power to resist exposure to the deprivations of poverty will exercise their power to avoid taking their turn.

A hierarchical society typically will have a hierarchical occupational structure. It is hierarchy that lays the material foundation for discrimination. Occupations with better pay, superior status, great stability, and, within the evolving cultural norms, which give greater weight to mental rather than manual work will be preferred. If they are captured by a specific ethnic or racial group, the group will defend their turf from invasion.

This is far from Lebedoff's and Hernnstein's pure IQ meritocracy rooted in a genetic allocation of social status. This is stratification based upon naked group power. Control over training, credentials, experience, and information networks dictates access to preferred positions—*not* mythical equal opportunity. Indeed, to the extent that measured intelligence can be nurtured (to the extent that Hernnstein has overemphasized the hereditarian component), that can affect the racial distribution of slots. Ethnic or racial groups with power can actively transform potential rivals into noncompetitors by distorting the nurturing mechanisms. For example, they can not only insure that their own children go to quality schools, but they can channel children from potential rival ethnic or racial groups into schools where they will be subject to programmed retardation. Then those who are poor appear *ex post facto* to be social failures because of their own deficiencies, when, in fact, the genesis of those apparent deficiencies can be found in the execution of raw aggression by more powerful ethnic or racial groups seeking to preserve their own comparatively aristocratic status.

The foregoing should suggest that the transition from capitalism to managerial society holds no greater promise for elimination of poverty. Nonetheless, the managerial elite, in all likelihood, will invest much time and rhetoric in holding out just such a possibility through "discovery" of the proper array of policies. Because managerial society is hierarchical as well, the motivation still will exist to produce noncompeting groups among potential rivals. The groups reduced to the most extreme noncompetitive status will constitute the underclass and will display the central feature of a caste group—the intergenerational repetition of low social status. Indeed, society as a whole will take on the character of caste civilization, for the sons and daughters of the managerial class also will follow in their parents' upscale footsteps. Thus the overclass will constitute the upper caste, *de facto* the permanent Brahmins.

Dominant ethnic or racial groups will find it especially useful to degrade the mental capacity of potential rival groups, often to the point where members of the disinherited come to doubt their own capacity to perform intellectually. Consider, for example, the case of the black athlete and the NCAA's Proposition 48 requiring a minimum 700 SAT score and 2.0 high school GPA for an athlete to be eligible to play as a college freshman at a Division 1 school. Proposition 48 has met the opposition from many black coaches and presidents of historically black colleges and universities, suggesting that even they do not believe that large numbers of young black athletes are capable of meeting such standards.

The further twist, however, is that tests like the SAT are broadly accepted markers for access to the university. In managerial society, such testing and refinement of tests become the norms for entry to specialized or advanced training, separating the overclass from those beneath them. In American society, standardized tests tend to establish racial separation as well. Proportionately fewer blacks cross the mental capacity hurdles; of course, proportionately fewer are given the preparation to do so.

Managerial society aspires to pure meritocracy. Instead, it delivers a modern "slavocracy" based upon race and measured (or credentialed) mental capacity that admits blacks in far smaller proportions than whites into the new elite. And even the occasional admits still are viewed with a skepticism not faced by their white peers. Invariably, black intellectuals are stigmatized as necessarily being less capable. Two direct conclusions can be drawn. Poverty will not vanish in managerial society; neither will racial discrimination in all its dimensions.

Eugenics Once Again?

The Great Society-cum-civil rights movement was an accommodation to the aspirations of the black middle class to cope with black urban revolt. It was a problematic accommodation. Housing desegregation led to black middle class out-migration from black urban ghettos contributing to destruction of the class diversity of black communities. School desegregation went hand in hand with deterioration of the quality of schooling for large numbers of black youths. Affirmative action's original mission was to serve as a mechanism to put those blacks into positions for which they were well qualified but had been excluded on strictly racial grounds. Later it became viewed as a means for engineering an end to the historically produced numerical racial imbalances across American society, leading to stigmatization of blacks as recipients of a special boost, like handicap golfers, into the positions they have attained.

Concomitantly, there has been a pattern of increased polarization between the black middle class and the black underclass. This is paradoxical, given the black middle class's overrepresentation as service providers in social welfare agencies and the black underclass's overrepresentation as service recipients.[18] Spatially separate and economically distinct, both segments of black America share mutual vulnerability to cutbacks in social programs. Moreover, since the last years of the Carter administration and throughout the Reagan administration, the accommodation plainly has been undergoing progressive reversal.

Managerial society has and will have its race and poverty problems—glaring blots on the ostensible social perfectibility the managers' promise. Highly educated professionals long have possessed a certain fascination with eugenics—social perfectibility via managed procreation.[19] There is evidence to suggest that eugenics, which fell into disfavor with National Socialism's enthusiasm for its premises in the 1930s and 1940s, is riding a covert upsurge. For if the poor—and the black poor in particular—are not to be transformed from "undesirables" into "desirables," they may be removed literally by population control measures.

Even while eugenics was in eclipse, the managerial class generally maintained an ideological anti-natalism. The last eight administrations prior to Reagan's, dating from Roosevelt through Carter, endorsed population control as a significant part of an antipoverty package both domestically and internationally.[20] The Reagan administration was the first to demur. The Roosevelt administration marked the rise to dominance of the managerial elite with New Dealism. Population control has been targeted at the black poor—both through active policy and through neglect. Family planning programs have been located disproportionately in black communities with the self-conscious intent of reducing black fertility. At 1970 hearings before the House Subcommittee on Public Health and Welfare, Atlanta physician John McCain recommended continuation of the policy of funneling one-quarter of Georgia's family planning program into Atlanta. He pointed out that the cost of a "satisfactory" program would be $20 million in Georgia, $5 million of which should go to Atlanta. The cost of a "minimum" program would be $10 million, $2.5 million of which should go to Atlanta. But the City of Atlanta, with a population of about 497,000 people at the time, contained about 10 percent of the state's population. Why, then, should it receive one-quarter of the state's family planning budget, particularly when it costs more per patient to deliver family planning services in rural than in urban areas?[21] It was probably more than mere coincidence that Atlanta contained one-quarter of the state's black population.

Birth control services were first funded at the state level in the South in the early 1960s. Southern state legislatures have never been recognized for their desire to protect women's fertility rights. Lincoln Pashute concluded an empirical study on the determinants of the introduction of birth control services at the state level in the U.S. with the observation that "Southern society and its policies [were] motivated, at least in part, by the desire to reduce the fertility of blacks whether for racial reasons or because they believe blacks make welfare demands upon the state in excess of their contribution, or both together."[22]

The invidious and often race-specific thrust of population control measures apparently has affected the size of families receiving cash transfer assistance. In the Washington, D.C. area—an area with a 75-80 percent black population—the regional welfare caseload fell 9.5 percent between 1975 and 1978 according to a study prepared by Janice Outtz for the Greater Washington Research Center. Outtz said one reason was the decline in the size of the average welfare family from four persons in 1970 to three in 1977. A *Washington Post* staff writer speculated the decline was due to "the availability of publicly financed abortions under the Medicaid program that serves welfare recipients."[23] Indeed, by 1979 there were 13,611 induced abortions performed on residents of the District of Columbia, considerably larger than the 9,404 recorded live births.[24]

Increased access to abortions for the poor in the 1970s coincided with a real decline in public assistance that continues nationally to the present. Again in the Washington, D.C. area, the cost of living rose 68 percent between 1970 and 1978, while payments rose only13 percent in nominal terms.[25] Nationally, the combined money value of food stamps and AFDC payments for a family of four rose less than the cost of living. Between 1974 and 1979, the real purchasing power of monthly AFDC plus food stamps fell from $520 to $478 or 8 percent. The State of Texas held AFDC payments constant at $140 per month for a family of four for over a decade.[26]

What would be more subtly genocidal than simultaneously to provide more resources for people to limit their family size while depriving them of resources to support their children who are living? The contradictions have been quite plain. Of the 5 million or so women in the national population whom the government identified as being "in need" of family planning services in the early 1970s, 70 percent were white. Yet ". . . little if anything [was] being done to reach these 3,500,000 white women."[27] As public health physician W.A. Mason observed at the time, "It is no secret that in many communities, contraceptive services are concentrated in black communities, serving primarily blacks with little or no attention to the white poor, the middle class or the affluent."[28]

Since Joseph Califano's tenure as Secretary of Health, Education and Welfare, public funds no longer can be used to fund abortions. Journalist Ken Auletta has been quoted as expressing displeasure with this policy because of "the 'incalculable costs' of making abortion harder to obtain. Among those costs: More future city criminals will be incubated, unwanted kids, entering the world without nurturing and self-esteem."[29] Better to land a preemptory strike *before* birth, in Auletta's estimation.

Indeed, involuntary sterilization of black women, especially welfare mothers, and the involuntary use of blacks in medical experiments have occurred on an extensive basis in the U.S.[30] The absence of public health and public policy measures to contain AIDS, illegal drug use, cardiovascular diseases, cancers, and other illnesses in the black population is glaring. Imprisonment and military service siphons off the black male population.

Capitalist society possesses a certain ambivalence about population. A growing population might dilute per capita income, but on the other hand it could provide both an extended market and slow wage growth. Certainly, one of Marx's key theoretical claims was the proposition that capitalism needed a surplus population, albeit a reasonably disciplined surplus was preferable.[31]

An Unfinished Counterrevolution

Managerial society, in contrast, possesses undiluted anti-natalist impulses. All things are to be managed and controlled, including population, on both quantity and quality dimensions. The reversal of population policy under Reagan's presidency is revealing of his administration's exceptionalism.

The Reagan presidency represented capital's counterrevolution against the managerial estate—the attempt to restore a social and economic order that predated the New Deal. Thus, steps were taken to roll back the welfare state, to reduce the scope and scale of government, and to deregulate the financial sector. At base, what was called "meanness mania" by some observers (or pure racism by others) was not primarily an assault on the U.S. working class, nor was it primarily an assault on black America. It was first and foremost class warfare conducted by the business interests against the managerial class with the intention of reducing that class to the sycophant function it possessed in the 1920s.

But this has been an incomplete counterrevolution. A capitalist restoration now depends upon an ideological struggle requiring reliance on expert knowledge. The business interests can go out and get their own experts as hired guns or mercenaries. But the language, the arguments, the very terms of social policy debates are established by members of their rival class. Ultimately, then, the managerial class will determine how broad or narrow the scope will be for the private sector. The right-leaning faction favors an extensive role for private enterprise; the left-leaning faction favors industrial policy, worker management, and state planning of investment. This is the core ideological rupture within the managerial class, aggravated by the fact that members of the managerial class can flexibly alter their allegiances and can even move back and forth between public and private sector positions.[32]

Furthermore, to conduct its struggle against the managerial class, capital must enlist the support of the working class, particularly when electoral politics matter. The alliance of the 1930s was between the working class and the managerial class. This was the making of the New Deal coalition that only fractured some 40 years later. The alliance of the 1930s was built over shared benefits associated with construction and expansion of the welfare state. The goal was the restoration of economic well-being.

The alliance of the 1970s was between the working class and capital. This alliance was built over the issues of family, schooling, and lifestyle. The goals were restoration of morality, family ties, and personal worth. Both alliances are inherently fragile. The managerial class is uncomfortable with the anti-intellectualism of the working class. The working class dislikes the arrogant paternalism of the managerial class. These are culturally incompatible social classes.

Capital is uncomfortable with prospects of any renewal of working class demands for higher wages, improved working conditions, and especially reductions in the length of the working day. The working class recognizes that capital is their natural enemy. These are economically incompatible social classes.

Consider again the aforementioned fluidity of the managerial class. The chameleon-like quality permits the class to shift broadly, as times dictate, to advocacy of more free market-oriented or more state planning-oriented policies. This is both a class strength and weakness. It is a strength in dealing with capital, since the class can adapt rapidly to changed conditions favorable or unfavorable to its hegemony. It is a weakness insofar as an ideologically fractioned class can split into internal welfare.

NOTES

1 David Lebedoff, "The Dangerous Arrogance of the New Elite," *Esquire* 90, 5 (August 29, 1978): 20

2. Lebedoff, "Dangerous Arrogance," p 20

3. Lebedoff, "Dangerous Arrogance," pp. 20-21.

4 Lebedoff, "Dangerous Arrogance, p 21

5 R.J. Herrnstein, *I.Q. in the Meritocracy* (Boston· Little, Brown and Company, 1971), pp 9-10.

6. Dan Morgan, "A Mixed Message on Education From the Home of 'the Bomb,'" *The Washington Post*, 19 October 1980, sec A, p. 12.

7. The artistic/artisanal wing of the Eastern European intellectual community is especially prominent among the new leadership Vytautus Landsbergis, the Lithuanian president, is a pianist, musicologist, and biographer of Lithuanian composer Mikalojus Ciurlionis Vaclav Havel of Czechoslavakia is a playwright and short story writer. Poland's Takusz Mazowieski was a journalist who worked for Solidarity's newspaper East Germany's Lothar de Maziere, likely to be the next prime minister, worked as a lawyer but also had played in a philharmonic orchestra in East Berlin. See Don Kirk, "Maestro Directs Lithuania," *USA Today*, 27 March 1990, sec A, p 2 and Juan J. Walte, "Intellectuals Rise to Top in Eastern Europe," *USA Today*, 27 March 1990, sec A, p 2.

8. The rise of the managerial estate has been depicted in a wide variety of sources In addition to Lebedoff, see James Burnham's widely misinterpreted book, *The Managerial Revolution What Is Happening In the World Today* (New York John Day Co , 1941), Barbara and John Ehrenreich, "The Professional-Managerial Class" in *Between Labor and Capital*, ed Pat Walker (Boston South End Press, 1979), Nicos Poulantzas, "The New Petty Bourgeoisie," *The Insurgent Sociologist* 9 (Summer 1979); Alvin Gouldner, *The Future of the Intellectuals and the Rise of the New Class* (New York Seabury Press, 1979), an exchange between U.S. Senator Claiborne Pell and Professor Louis Hartz in U S. Senate Committee on Foreign Relations, Hearings· *The Nature of Revolution* (Washington, DC. U.S. GPO, February and March 1968), p 36, and Jean-Christophe Agnew, "A Touch of Class," *Democracy* (Spring 1983) 59-72

9 For a discussion of both perspectives see Magali Sarfatti Larson, "Proletarianization and Educated Labor," *Theory and Society* 9 (1980). 131-75.

10 In a brilliant study of modern Britain, Harold Perkin has argued that professionalization is a socially vertical phenomena, penetrating all strata of society. Thus, Perkin contends that the rise of what he terms "professional society" heralds the end of class society, as all tiers of the population sort between the qualified and the unqualified rather than between upper and lower classes. See Harold Perkin, *The Rise of Professional Society: England Since 1880* (London and New York Routledge, 1989), especially pp. 2-9

The argument made here, instead, is that professionalization has meant a transformation of class society Although the establishment, formalization, and monitoring of entry standards is a characteristic of occupations up and down the job ladder, the upper class is comprised of professionals *with advanced educational credentials* What separates the average lawyer from the average plumber is not occupation-specific knowledge nor occupation-specific expertise,but the former's passage through the key defining cultural center for the managerial class, the university Non-elite occupational groups simply have learned the exclusionary advantages of setting "professional standards" in maintaining monopoly control over their respective job tiers Also see the discussion in Larson, "Proletarianization and Educated Labor," 141-51

11 For medicine see E Richard Brown, *Rockefeller Medicine Men Medicine and Capitalism in America* (Berkeley· University of California Press, 1979), 13-89, 112-19 For the development of the university system on a professional basis under corporate jurisdiction see Thorstein Veblen, *The Higher Learning in America A Memorandum on the Conduct of Universities by Business Men* (New York Hill and Wang, 1957, originally published in 1918) For social work itself see Frank J. Weed, "Bureaucratization as Reform The Case of the Public Welfare Movement, 1900-1929," *Social Science Journal* 16 (October 1979) 79-90.

Agnew, "A Touch of Class," p 70 observes

> Whether we are speaking of middle-level management, engineering, advertising, public relations, journalism, law, social sciences, and medicine, or the helping professions, the stories are all strikingly similar—indeed, almost formulaic a narrative of academic entrepreneurship and institution building, a story of journals, associations, and foundations, of examinations and degrees, in short, a story of technical and cultural gatekeeping and awarding credentials This may not be the stuff out of which epic sagas are made, but it is nonetheless a cultural history. If anything, it is a conspicuously cultural history· a history of a class whose work and play are almost entirely taken up with the manipulation and improvisation of social and technical symbols, a "speech community" whose culture can be described in [Alvin] Gouldner's words, as one of "critical and careful discourse "

12 Lewis Corey, *The Crisis of the Middle Class* (New York Covici Friede, 1935), 23

13 Burnham, *The Managerial Revolution*

14. Michael K Brown and Steven Erie, "Blacks and the Legacy of the Great Society. The Economic and Political Impact of Federal Social Policy," *Public Policy* 29 (Summer 1981) 229-330

15 Martin Shapiro, "Judicial Activism," in *The Third Century America as a Post-Industrial Society*, ed Seymour Lipset (Chicago The University of Chicago Press, 1979)

16 Lebedoff, "Dangerous Arrogance," *passim*

17 William J Wilson, *The Truly Disadvantaged The Inner City, the Underclass, and Public Policy* (Chicago· The University of Chicago Press, 1987).

18 Brown and Erie, "Blacks and the Legacy of the Great Society "

19. See, e.g , Perkin, *Rise of Professional Society*, especially pp 53-61

20. Rowland Evans and Robert Novak, "The Population Policy Battle," *The Washington Post*, 13 June 1984, sec. A, p. 23

21. Testimony of John McCain in "Family Planning Services " *Hearings Before the Subcommittee on Public Health and Welfare of the Committee on Interstate and Foreign Commerce, House of Representatives, on H R 15159, H R 9107, H R 9108, H R 15691 and H R 11123 (and identical bills) and S 2108*, Serial No 91-70, August 3, 4, and 7, 1970, p 227

22 Lincoln Pashute, "Economics Versus Racial Discrimination in the Provision of Birth Control Services in the United States" in *Research in Population Economics*, ed Julian Simon, Vol 1, 1978, pp 189-96.

23 Jack Eisen, "Welfare Families Said Hard-Hit in '70s," *The Washington Post*, 22 June 1980, p. B3.

24 Government of the District of Columbia, "Induced Pregnancy Terminations (Abortions) in the District of Columbia 1979," Statistical Note 41, November 1980, p 1 and Table A-Vital Statistics Summary Sheet· District of Columbia Residents, 1970-1978

25. Eisen, "Welfare Families," p B3.

26 Richard Kasten and John S. Todd, "Transfer Recipients and the Poor During the 1970s " Paper presented at the Second Research Conference of the Association for Public Policy Analysis and Management, October 24-25, 1980

27. William A Darity [Sr.], "Crucial Health and Social Problems in the Black Community " Paper presented before the Black Caucus of Health Workers, APHA, 100th Annual Meeting of the American Public Health Association, Atlantic City, November 4, 1972.

28. W A Mason, "Population Control, Contraception, Family Planning, and the Concept of Genocide " Address given at Morehouse College, January 1972, p 3

29. Nat Hentoff, "Conundrums and Choices· Jews and Abortion," *Washington Jewish Week*, October 1989, pp. 14, 16 One wonders if China's explicit forced abortion policy is a harbinger of things to come in the U S. See Stephen W. Mosher, "How China Uses U N Aid for Forced Abortions," *Wall Street Journal*, 13 May 1985, p 23 However, the Chinese policy is linked to a *universal* program of family size limitation, not a group-specific policy

30. See Thomas Shapiro, *Population Control Politics. Women, Sterilization, and Reproductive Choice* (Philadelphia. Temple University Press 1985). Ironically, although black women on welfare have higher fertility rates than white women on welfare, fertility of women on welfare, both black and white, is in fact *lower* than that of women in the nonwelfare population The longer a woman is on welfare, the *less* likely she is to have an additional child See Mark R Rank, "Fertility Among Women on Welfare Incidence and and Determinants," *American Sociological Review* 54 (1989). 296-304.

31 Karl Marx, *Das Capital*, Volume 1 (New York Vintage Books, 1977), pp 762-870

32 As Perkin, *Rise of Professional Society*, p. 10, observes in the context of his characterization of the managerial estate as "professional society"

> The main struggle for society's resources, therefore, is between those who benefit directly from government expenditure and those who see themselves as the source of the expenditure [B]y far the most important division between the interest groups is between the public sector professions, those funded directly and indirectly by the state, and the private sector professions, chiefly the managers of private corporations As the struggle between lord and peasant was the master conflict in feudal society and the struggle between capitalist and wage earner the master conflict in industrial society, so the struggle between the public and private professions is the master conflict of professional society

After all, corporate managers, who are not mere intellectual propagandists for the business regime, become the contemporary representatives of capital in an environment where ownership and management have not been fused in a single entrepreneur for many years Thus Perkin's "struggle between the public and private professions" can be reconstituted as the struggle between the managerial class and capital.

33 Also see William A Darity [Jr], "The Managerial Class and Surplus Population," *Society* 21, 1 (November/December 1983), pp 54-62

Finally, the Reagan administration simply did not succeed in limiting the scope of government Perhaps in part because of its own intransigence over maintenance of the size of the military establishment, it was driven to more limited accomplishments on fronts where it wanted to make deep cuts Thus the managerial estate lives on into the Bush administration and, one expects, beyond It promises some, like Richard Hernnstein, a meritocracy of those with measured mental capacity A deeper look indicates that it carries the seeds of genocide for those deemed unwanted in this, our "brave new world "

The Federal Anti-Bias Effort

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Affirmative action under the federal contract compliance program (Executive Order 11246 as amended) is a policy that, at times, has promoted modest employment advances for minorities, but always at the cost of great social discord. To its proponents, affirmative action is both equitable and efficient. To its critics, it is neither.

Federal affirmative action may be modeled as a tax on white male employment in contractor firms, and so can be analyzed in the standard two-sector models applied to unionization or taxation (Leonard 1984a). A controversial question is whether this tax improves or reduces efficiency. Some proponents of affirmative action advocate it for equity reasons, arguing for retribution for past wrongs such as slavery, or for an investment in future social peace and cohesion. Increased equity may also improve efficiency by counterbalancing discrimination. In Becker's model of discrimination, for example, an affirmative action tax forces employers towards the efficient use of labor (Leonard 1984c). The two questions to be asked of affirmative action are first, whether it has increased minority and female employment, and second (and more difficult), whether this has induced or reduced discrimination.

The purpose and development of affirmative action cannot be fully understood outside of history, a history that includes most saliently the institution of slavery in the eighteenth and nineteenth centuries, and the civil rights movement of the mid-twentieth century. The genesis in discord and crisis of the first Executive Order by President Roosevelt is most instructive. To protest employment discrimination at the beginning of World War II, A. Philip Randolph, president of the Sleeping Car Porters Union, threatened to disrupt the defense effort by a mass demonstration of blacks in Washington, D.C. on July 1, 1941. Less than one week before the planned rally, Executive Order 8802 was issued and the demonstration called off (Goldstein 1981, p. 10). In the words of the U.S. Commission on Civil Rights, "the Executive Order was prompted by the threat of a Negro March on Washington, which would have revealed to the world a divided country at a time when national unity was essential" (USCCR 1961, p. 10). Accommodation was only reached under dire threat, and even then was of a limited nature.

The distance this country has come in terms of the growing import of affirmative action, expanding intervention by the federal government, and changing attitudes towards discrimination since 1941 can best be judged by considering the words of Mark Ethridge, first chairman of the Fair Employment Practice Committee, established to supervise compliance with the executive order. In the following quote, Ethridge sharply limits the scope of antidiscrimination policy in a manner startling to modern eyes.

> Although he defended the granting of civil rights and equal opportunity to Negroes, he also affirmed his personal support of segregation in the South. Stressing that 'the committee has taken no position on the question of segregation of industrial workers,' he emphasized that 'Executive Order 8802 is a war order, and not a social document,' that it did not require the elimination of segregation, and that had it done so, he would have considered it 'against the general peace and welfare . . . in the Nazi dictatorial pattern rather than in the slower, more painful but sounder pattern of the democratic process.' (Ruchames 1953, p. 28)

Of course, the delicate question of how to swiftly remedy the harm done by discrimination without distorting the democratic process is still with us, as is the question of whether the democratic process can function well outside an integrated society. Democratic society requires a consensus for change, but it depends upon the full participation of its members. The last 40 years have witnessed a slow and at times painful process of confrontation and accommodation, developing a consensus that provides the foundation for a lasting change in attitudes towards discrimination.

Prior to Executive Order 10925, issued March 6, 1961 by President Kennedy, the antidiscrimination program for federal contractors lacked any real teeth. In a detailed study of the presidential Fair Employment Practice Committees, Norgren and Hill (1964, p. 169, p. 171) state: "One can only conclude that the twenty years of intermittent activity by presidential committees has had little effect on traditional patterns of Negro employment," and that "it is evident that the non-discrimination clause in government contracts was virtually unenforced by the contracting agencies during the years preceding 1961." Compliance programs, such as Plans for Progress and its predecessors, were voluntary. Their history strikes at least a cautionary note about the effectiveness of programs that have no legal sanctions behind them. The 1961 Executive Order was the first to go beyond antidiscrimination and to require contractors to take affirmative action, and the first to establish specific sanctions including termination of contract and debarment. Coming on the heels of Title VII of the Civil Rights Act of 1964, Executive Order 11246, which made the Secretary of Labor rather than a presidential committee responsible for administering enforcement, was the first to be enforced stringently enough to provoke serious conflict and debate. On October 13, 1967, Executive Order 11375 amended 11246 to expand its coverage to women, although effective regulation against sex discrimination did not reach full stride until after the Equal Employment Act of 1972 was enacted.

The details of the affirmative action obligation began to be elaborated in a twisting history. Detailed regulations, including numerical goals, were introduced in 1969, after the Comptroller General ruled that the affirmative action obligation was too vague to fulfill the requirement that minimum contract standards be made clear to prospective bidders [48 Comp. Gen. 326 (1968)]. Numerical goals were first introduced in the manning tables embodied in the Cleveland and Philadelphia plans for construction contractors (see Jones 1982), and later won the tacit approval of Congress and the courts.

Under Executive Order 11246, federal contractors agree "not to discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin, and to take affirmative action to ensure that applicants are employed and employees are treated during employment without regard to their race, color, religion, sex or national origin" [3 C.F.R 169 202(1) (1974)]. This language imposes two obligations: first, not to discriminate; and second, whether or not there is any evidence of discrimination, to take affirmative action not to discriminate. It is a measure of this nation's progress that the first obligation is now largely beyond debate. The redundant sounding second obligation, however, is anything but. It has provoked continual controversy, and its meaning and effect are not well understood. In the heated political arguments over whether and what affirmative action should be, mythic visions have come to overwhelm any clear conception of what affirmative action actually is. To say that this second obligation, as it has been developed in the regulations, has provoked a good deal of debate would be a considerable understatement (see also Fiss 1971 and Glazer 1975).

Reviewing the development of affirmative action into "quotas," Lawrence Silberman, former Undersecretary of Labor from 1970 to 1973, wrote:

> In practice, employers anxious to avoid inquiry from government officials concerned only with results (rather than merely with efforts) often earmarked jobs for minorities without regard to qualifications. . . . We wished to create a generalized, firm, but gentle pressure to balance the residue of discrimination. Unfortunately, the pressure numerical standards generate cannot be generalized or gentle; it inevitably causes injustice. . . . Our use of numerical standards in pursuit of equal opportunity has led ineluctably to the very quotas, guaranteeing equal results, that we initially wished to avoid. . . . Federal courts already had begun to fashion orders in employment discrimination cases which went beyond relief for those specifically discriminated against. The orders required employers found guilty of discrimination to hire in accordance with a set ratio of whites to blacks, whether or not new black applicants had suffered discrimination. Thus was introduced a group rights concept antithetical to traditional American notions of individual merit and responsibility.

This raises at least two issues. The first is that an affirmative action program without measurable results invites sham efforts and may also fail to meet the requirement of federal procurement law that prospective bidders be informed of the minimum standards for a contract. On the other hand, numerical standards in the quest for equal opportunity open the door to an emphasis on equal results. The second issue raised is whether discrimination and its remedy should be addressed in terms of groups or individuals.

In the past, the affirmative action obligation has been criticized as being vague and open-ended. In 1967, the director of the Office of Federal Contract Compliance (OFCC), Edward Sylvester, stated: "There is no fixed and firm definition of affirmative action. I would say that in a general way, affirmative action is anything you have to do to get results. . . . Affirmative action is really designed to get employers to apply the same kind of imagination and ingenuity that they apply to other phases of their operation" (Report 1967, pp. 73-74).

To be vague concerning methods is the ideal decentralized approach, but this is also vague about the critical issue of ends. What is the goal against which results are judged: nondiscrimination or increased minority and female employment? The distinct, practical question of whether the two can be distinguished in an operational sense is, of course, one of the important questions that will concern us here.

Past Studies

The literature on affirmative action can be divided into studies of the regulatory process that finds it mortally flawed and studies of impact that find it successful. The process studies by the U.S. Commission on Civil Rights (USCCR), the General Accounting Office (GAO), and the House and Senate Committees on Labor and Public Welfare all conclude that affirmative action has been ineffective and blame weak enforcement and a reluctance to apply sanctions. For example, in its 1975 appraisal of the contract compliance program, the GAO found (p. 30) that "the almost nonexistence of enforcement actions taken could imply to contractors that the compliance agencies do not intend to enforce the program." That this is not merely politics can be judged from the fact that the Department of Labor has been sued with some measure of success more than once for failure to enforce affirmative action properly. [See, e.g., the case of *Legal Aid Society of Alameda County v. Brennan*, 608 R2d 1319 (9th Cir. 1979), cert. denied 100 S.Ct. 3010 (1980).] Debarment, the ultimate sanction, has been used less than 30 times; debarment of the first nonconstruction contractor did not occur until 1974. The GAO and USCCR have found that other forms of regulatory pressure, such as pre-award reviews, delay of contract award, and withholding of progress payments, have not been forcefully and consistently pursued. However, as evidenced by the increased incidence of debarment and back-pay awards, enforcement did become more aggressive after 1973.

In light of the unanimity of these process studies in finding the affirmative action regulatory mechanism seriously deficient, it is surprising that the few econometric studies of the impact of affirmative action in its first years (Burman 1973; Ashenfelter and Heckman 1976; Goldstein and Smith 1976; Heckman and Wolpin 1976), all based on a comparison of EEO-1 forms by contractor status, have generally found significant evidence that it has been effective for black males. These few studies of the initial years of affirmative action (1966-73) are not directly comparable because of different specifications, samples, and periods. They do find, nevertheless, that despite weak enforcement in its early years, and despite the ineffectiveness of compliance reviews, affirmative action has been effective in increasing black male employment share in the contractor sector, but generally ineffective for other protected groups. (See Brown 1984a for a review.) These past studies are all based on data for a period that largely predates the beginning of substantial enforcement of regulations barring sex discrimination, the start of aggressive enforcement in the mid-seventies, and the major reorganization of the contract compliance agencies into the Office of Federal Contract Compliance Programs (OFCCP) in 1978.

The effects are not large, generally on the order of less than a 1 percent increase in the black male share of employment per year. However, they do imply that even with seemingly weak enforcement, affirmative action under the contract compliance program did increase the proportion of black males in federal contractor firms in the early 1970s.

The Impact of Affirmative Action on Employment

Has affirmative action been effective in increasing the employment of minorities and women? Affirmative action under the executive order applies only to federal contractors. One method of judging the effect of affirmative action is then to compare the growth of minority and female employment at federal contractor establishments with their employment growth at similar establishments that do not bear the affirmative action obligation. With the cooperation of the U.S. Department of Labor, I performed such a comparison using EEO-1 data on employment demographics reported by 68,690 establishments in 1974 and 1980. This sample includes more than 16 million employees. The results summarized here are reported at length in Leonard (1983) and (1984a).

Table 1 (reproduced from Leonard 1984a) compares the mean employment share of demographic groups in 1974 and 1980 across contractor and noncontractor establishments. Between 1974 and 1980, black male and female and white female employment shares increased significantly faster in contractor establishments than in noncontractor establishments. In Leonard (1984a), I have estimated the impact of affirmative action after controlling for establishment size, growth, region, industry, occupational and corporate structure. Even controlling for these other factors, the employment of members of protected groups grew significantly faster in contractor than in noncontractor establishments.

Expressed as an annual growth rate, black male employment is 0.62 percent greater in the contractor sector. For white males, the annual growth rate is 0.2 percent slower among contractors, so contractor status appears to shift the demand for black males relative to white males by 0.82 percent per year. The annual demand shifts relative to white males for other groups are: other minority males 1.48 percent; white females 0.66 percent; and black females 2.15 percent. These effects are significant at the 99 percent confidence level or better, and are robust across a number of specifications. The effects for black males are similar in magnitude to those previously estimated by Ashenfelter and Heckman (1976) and by Heckman and Wolpin (1976).

Table 1
Changes in Employment by Federal Contractor Status
1974 and 1980

Demographic group	Contractor status	1974 mean	1980 mean	*t*-statistics for change across status
Black	N	.053	.059	6.5
Males	Y	.058	.067	
Other	N	.034	.046	1.2
Minority males	Y	.035	.048	
White	N	.448	.413	16.4
Males	Y	.583	.533	
Black	N	.047	.059	5.7
Females	Y	.030	.045	
Other	N	.024	.036	1.1
Minority females	Y	.016	.028	
White	N	.394	.400	7.8
Females	Y	.276	.288	

SOURCE Leonard (1984a)

NOTE. The last column reports *t*-statistics for whether the change in demographic share between 1974 and 1980 differs by contractor status. N=noncontractor in 1974 (27,432 establishments), Y=contractor in 1974 (41,258 establishments).

Compliance reviews are the main enforcement mechanism; they involve an audit of employee demographics and employer's personnel procedures, with negotiations over suggested changes. Compliance reviews have played a significant role over and above that of contractor status. For example, for black males the growth rate in their employment was 3.8 percent greater in the contractor sector than in the noncontractor sector, while it was an additional 7.9 percent greater for those who had a compliance review compared to those who had not had such a review. Conversely, compliance reviews have retarded the employment growth of whites. The effect is significantly negative in the case of white females, but small and insignificant in the case of white males, whom one would have expected to bear the brunt of the adjustment. The anomalous result for white females is sensitive to specification. It is also difficult to reconcile with the positive impact of contractor status on white females, but may be influenced by a review process that asks for more than last year, rather than more than average, in a time of sharply increasing female labor supply. Direct pressure does make a difference. Simultaneity is unlikely to bias these estimates because, as we shall see, the probability of being reviewed hardly depends upon demographics.

The total impact of affirmative action on the growth rate of employment for black men among federal contractors is then the weighted average of the annual 0.62 percent shift among nonreviewed contractors and the 1.91 percent shift among reviewed contractors, or 0.84 percent per year. The corresponding demand shifts for other groups are black females 2.13 percent, minority males 1.69 percent, and white females 0.37 percent.

Regression estimates also indicate that minorities and females experienced significantly greater increases in representation in establishments that were growing and so had many job openings, irrespective of affirmative action. The elasticity of white male employment growth with respect to total employment growth is .976, significantly less than one. This indicates that members of protected groups dominate the net incoming flows in both contractor and noncontractor establishments. The supply of blacks has not greatly increased, so this suggests the importance in expanding employment opportunities of broader forces, such as Title VII, which apply to all sample establishments. The respective elasticities for black males, black females, white females, and other males

(1.22, 1.19, 1.02 and 1.09) are significantly greater than one. The efficacy of affirmative action also depends heavily on employment growth. Affirmative action has been far more successful at establishments that are growing and have more job openings to accommodate federal pressure.

Although affirmative action has lacked public consensus and vigorous enforcement, and has frequently been criticized as an exercise in paper pushing, it has actually been of material importance in prompting companies to increase their employment of blacks.

Occupational Advance

One of the major affirmative action battlefields lies in the white-collar and craft occupations. In these skilled positions, employers are most sensitive to productivity differences and have complained the most about the burden of goals for minority and female employment. It is also in this region of relatively inelastic supply that the potential wage gains to members of protected groups are the greatest.

The four econometric studies mentioned earlier, which found employment gains for blacks despite little enforcement of affirmative action in its early years, also found that while affirmative action increases total black male employment among federal contractors, it does not increase their employment share in the skilled occupations (Burman 1973; Ashenfelter and Heckman 1976; Goldstein and Smith 1976; Heckman and Wolpin 1976). These studies suggest that contractors had been able to fulfill their obligations by hiring into relatively unskilled positions. Before 1974, affirmative action appears to have been more effective in increasing employment than in promoting occupational advancement.

Some might argue that such a result is only to be expected, given a short supply of skilled minorities or females. However, even in the case of a small fixed supply, affirmative action should induce a reshuffling of skilled blacks and women from noncontractor to contractor firms, without any increase in overall supply being necessary. The long-run presumption behind affirmative action, however, is that trainable members of protected groups will be considered for promotion to skilled employment. Indeed, by the later 1970s, affirmative action was no longer as ineffective as it may have been in its early years at increasing minority employment in skilled occupations (Leonard 1984b). This difference may reflect the increasing supply of highly educated blacks, as well as the more aggressive enforcement program that developed in the mid- to late 1970s.

Analyzing occupational advance within nine broad occupations between 1974 and 1980, Leonard (1984b) finds black males' share of employment increased faster in contractor than in noncontractor establishments in every occupation except laborers and white-collar trainees, and except for operatives and professionals these differences are significant. The impact is found in both the proportionate change in black males' share of total employment, and in the proportionate change in the ratio of black male to white male share.

The total impact of the contract compliance program, the weighted sum of contractor and review effects, shows some evidence of a twist in demand toward more highly skilled black males. The contract compliance program has not reduced the demand for black males in low-skilled occupations except for laborers. It has raised the demand for black males more in the highly skilled white-collar and craft jobs than in the blue-collar operative, laborer, and service occupations. While this may help explain why highly skilled black males have been better off than their less skilled brethren, it does not help explain why black males should be having greater difficulty over the years in finding and holding jobs. Neither employment-population ratios nor unemployment rates of blacks relative to whites have shown a marked improvement over the past two decades.

Establishments that are not part of multiplant corporations have significantly lower growth rates of employment for members of protected groups. Corporate size is probably of greater consequence than establishment size, with larger corporations showing greater increases in minority and female employment. Establishment size itself has insignificant effects on white and black males, but other males and black females grow significantly faster at larger establishments, while white females grow significantly slower. It is also important to note that the tests here also control for the skill requirements of each establishment. Establishments that are nonclerical white-collar-intensive exhibit faster employment growth for both male and female blacks and significantly slower growth for white males.

For a program lacking public consensus and vigorous enforcement, this is a surprisingly strong showing. While the gains of white females are smaller than those of blacks, it is important to keep in mind that the employment of females and minorities has been increasing in both sectors. Indeed, if the OFCCP pressured establishments to hire more females and minorities relative to their own past records rather than to industry and region averages, the observed pattern is just what we would expect to see during a period when female labor supply had been growing. Females' share would increase at all establishments because of the supply shift, and contractor establishments would be under little pressure to employ more females than noncontractors. The relatively short history of affirmative action for females may also help explain the differential impact of affirmative action across protected groups.

Affirmative action has also helped nonblack minority males, although to a lesser extent. There is evidence of a twist in demand toward Hispanic, Asian, and American Indian males in white-collar occupations, particularly in sales and clerical positions, and away from this group in operative and laborer positions. Compliance reviews have had a strong and significant additional impact in the professional, managerial, and craft occupations. The total impact of the contract compliance program on nonblack minority males is positive in the white-collar, craft, and service occupations, and in training programs. Relative to white males, affirmative action has increased the occupational status of nonblack minority males by 2 percent.

The evidence within occupations suggests that the contract compliance program has had a mixed, and often negative impact on white females. For technical, sales, clerical, craft, and trainee workers, contractor status is associated with a significant decline in white females' employment share. Compliance reviews have also often had a negative impact. While both contracts and reviews produce a significant 1 percent increase in the index of white females' occupational status, this positive impact disappears when change in white females' occupational status are compared to the relatively greater gains of white males.

Black females in contractor establishments have increased their employment share in all occupations except technical, craft, and white-collar trainee. The positive impact of the contract program is even more marked when the position of black females is compared with that of white females.

It is possible that part of this occupational upgrading may be overstated because of biased reporting to the government, in particular the upward reclassification of minority or female-intensive occupations, as argued in the useful paper by Smith and Welch (1984). To the extent that contractors may have selectively reclassified black- and female-intensive occupations at a faster rate than did noncontractors, most studies will overstate the actual occupational advance due to affirmative action. However, this effect is unlikely to overwhelm the general direction of the results; pure reclassification would cause black losses in the lower occupations, which is generally not observed.

Moreover, this finding of occupational advance for nonwhite males is reinforced by evidence from Current Population Survey wage equations that affirmative action has narrowed the difference in earnings between the races by raising the occupational level of nonwhite males. These wage equations are reported at greater length in Leonard (1984d). These estimates of the wage effects of affirmative action offer evidence suggesting that the underlying supply of labor is not perfectly elastic. Minority male wages are higher relative to those of white males in cities and industries with a high proportion of employment in federal contractor establishments subject to affirmative action, although the effect is not always significant.

Affirmative action does not appear to have contributed to the economic bifurcation of the black community. Given increased pressure to justify the nonpromotion or discharge of blacks, fears have been raised that employers will screen blacks more intensely and be less willing to risk employing less skilled blacks. In practice, affirmative action appears to increase the demand for poorly educated minority males as well as for the highly educated. The lesson to be drawn from this evidence is that affirmative action programs work best when they are vigorouly enforced, when they work with other policies that augment the skills of members of protected groups, and when they work with growing employers.

Goals or Quotas?

Have these employment advances been achieved through the use of rigid quotas? The goals and timetables for the employment of minorities and females drawn from federal contractors under affirmative action stand accused of two mutually inconsistent charges. The first is that "goal" is really just an expedient and polite word for quota. Affirmative action has really imposed inflexible quotas for minority and female employment. The second is that these goals are worth less than the paper they are written on. Affirmative action is a game played for paper stakes and has never been enforced stringently enough to produce significant results.

Under Executive Order 11246, federal contractors are required to take affirmative action not to discriminate and to develop affirmative action plans (AAPs), including goals and timetables, for good-faith efforts to correct deficiencies in minority and female employment. The aim of this section, which summarizes Leonard (1985b), is to measure good faith, to determine what affirmative action promises are worth. Is negotiation over affirmative action goals an empty charade played with properly penciled forms, or does it in fact lead to more jobs for minorities and females in the contractor sector? If the latter is the case, are these goals so strictly adhered to as to constitute quotas? Since the reviews examined here have already been shown to be useful (Leonard 1984a), the question here is not "Are reviews effective?" but rather "Do promises extracted during the review process contribute to the impact of reviews?"

It is not beyond reason to suppose that they do not. Neither the penalties for inflating promises to hasten the departure of federal inspectors nor the prospects of being apprehended seems great. The ultimate sanction available to the government in the case of affirmative action is debarment, in which a firm is barred from holding federal contracts. The first debarment of a nonconstruction contractor did not take place until 1974, and in total only 26 firms have ever been debarred. If the OFCCP finds the establishment's affirmative action plan unacceptable, it may issue a show-cause notice as a preliminary step to high sanctions. This step has been taken in only 1 to 4 percent of all reviews (USCCR 1975,

p. 297). Of these, one-third to one-half involve basic and blatant paperwork deficiencies such as the failure to prepare or update an AAP (U.S. GAO 1975, p. 26).

The other major sanction used by the OFCCP is back-pay awarded as part of a conciliation agreement. In 1973 and 1974, $54 million was awarded in 91 settlements, averaging $63 per beneficiary (U.S. GAO 1975, p. 46). In 1980, in an even more skewed distribution, $9.2 million was awarded to 4,336 employees in 743 conciliation agreements (USCCR 1982, p. 47). These beneficiaries represented less than two-thirds of 1 percent of all protected-group employees at just the reviewed establishments. While these affirmative action sanctions have not been heavily employed, in many cases regulatory sanctions, like weapons of war, are judged most successful just when they are used the least. That does not seem to be the case here. The U.S. Commission on Civil Rights, the General Accounting Office, committees of both houses of Congress, and the courts have all concurred in the judgment that the contract compliance agencies have not made full and effective use of the sanctions at their disposal.

The low penalties are compounded by the low probability of apprehension, although the Department of Defense (DOD), upon whose review this section concentrates, had one of the most vigorous programs. In 1976 DOD is reported to have reviewed 24 percent of its identified contractors, compared to an average for all compliance agencies of 11 percent (USCCR 1977, p. 113). In 1977 DOD had a ratio of 42 contractor facilities per staff member, and a total budget of $345 per contractor (USCCR 1977, p. 107). It is striking to note that compliance reviews have not typically been targeted directly against the most blatant form of employment discrimination. An establishment's history of employment demographics has typically not played a role in the incidence of compliance reviews, for a reason as procedurally obvious as it is logically obscure: compliance officers have not generally looked at an establishment's past Affirmative Action Plans (AAPs) or EEO-1 forms in targeting reviews. Heckman and Wolpin (1976) report that reviews are esentially random with respect to the level or growth rates of an establishment's demographics. Leonard (1985b) finds evidence that establishments with more blacks and females are actually more likely to be subsequently reviewed. These two empirical studies agree that affirmative action compliance reviews have not been targeted with greater frequency at establishments with relatively few minorities or females.

In this light, the expected penalties for making promises to the government with little regard for the likelihood of fulfilling those promises do not seem overwhelming. In such circumstances, affirmative action promises may contain little, if any, information about the establishment's future employment. On the other hand, the OFCCP may use more subtle and less easily observed pressures. Firms may care about their reputations, not only with the OFCCP, but also with their own employees and the public, and so strive to set reasonable goals. More important, firms may react to the threat of Title VII litigation, with its substantial legal costs and penalties, hanging over their heads while under affirmative action review.

The employment goals that firms agree to under affirmative action are not vacuous; neither are they adhered to as strictly as quotas. While affirmative action promises are inflated, they are not hollow. For a sample of establishments that experienced more than one compliance review during the 1970s, Leonard (1985b) compares the goals with the employment actually achieved one year later. The model year for which projections are made is 1976. Establishments on average overestimate the growth of total employment. They project 1 percent employment growth one year ahead, but on average, employment subsequently falls by 3 percent.

Neither absolute minority nor female employment increased, but both minority and female employment shares did increase. This is because the contraction in employment that occurred was almost lily-white and predominantly male. Most of the average employment decline of 27 was accounted for by white males, whose employment fell by 21. Put another way, while white males averaged 63 percent of initial employment, they accounted for 78 percent of the employment decline. Since females and minorities typically have lower seniority, they are usually found to suffer disproportionately more during a downturn. In this perspective, the finding here that white males accounted for most of the employment decline is itself striking evidence of the impact of affirmative action. These establishments are projecting swift and substantial increases in black male employment.

These projections and actualizations can also be expressed as shares of total employment. Over time, minority and female employment shares are indeed growing, but not nearly as fast as projected. The firms project growth in minority and female employment share far in excess of their own past history, and far in excess of what they will actually fulfill. Is there then any information at all in their projections, or is the entire procedure an exercise in futility?

The administrative records of completed compliance reviews include data on past and projected employment demographics, indications of deficiencies found in affirmative action plans, and an indicator for pre-award compliance reviews in which case one might expect the government's leverage to be greater. These records also indicate successively higher levels of government pressures brought to bear: hours expended by review officers, progress reports required, conciliation process initiated, and, finally, show-cause notice issued. Each of these mileposts in the bargaining process reflects both the establishment's resistance to bureaucratic pressures and, at the same time, increasing levels of bureaucratic pressure itself. If establishment resistance can be controlled for, then these may be taken roughly as inputs into a regulatory production function. By assuming that corporate resistance is controlled for by past growth rates of protected-group employment share, and by initial notification of deficiencies, we can then ask what the marginal impact is on factors of regulatory production such as conciliation agreements and show-cause notices. These identifying assumptions are open to question. Caution should be exercised in interpreting the following results since they may be biased toward finding ineffective enforcement if enforcement has been targeted against the most recalcitrant cases.

In general, the results on the impact of various enforcement tools are mixed and often insignificant. On average, employers had not significantly altered their demographics a year later in response to pre-award reviews, interim progress reports, conciliation agreements, or show-cause notices. On the whole, there is no compelling evidence that these detailed components of the enforcement process have a significant impact on the employment of members of protected groups.

The major finding in Leonard (1985b) is that goals set in these costly negotiations do have a measurable and significant correlation with improvements in the employment of minorities and females at reviewed establishments. At the same time, these goals are not being fulfilled with the rigidity one would expect of quotas. While the projections of future employment of members of protected groups are inflated, the establishments that promise to employ more do actually employ more. The striking finding is that the affirmative action goal is the single best predictor of subsequent employment demographics. It is far better than the establishment's own past history, even controlling for the direct impact of detailed regulatory pressure.

This indicates that while establishments promise more than they deliver, the ones that promise more do deliver more, even conditioning on the past growth rate of employment share. There is significant information in the projection over and above what could have been predicted on the basis of past history. On the other hand, the projection falls far short of perfect information. For example, on average a projected 11 percentage point increase in the growth rate of black male employment share results in an actual increase of 1 percentage point, *ceteris paribus.*

Not only do establishments generally overpromise minority and female employment, they also overpromise white male employment. This reveals something of their strategy in formulating promises. They do not promise direct substitution of minority and female workers for white males; instead they promise more for all. More accurately, they promise to make room for more minority and female employees by increasing the size of the total employment pie. The first step in bringing these projections down to earth may simply be to ask the establishment whether the projected growth in total employment is reasonable.

We have a policy that appears to be effective in its whole and ineffective in its parts. Protected-group employment share does generally grow more rapidly at reviewed firms, and goals are strongly correlated with this growth. Do our results then indicate only the establishments' projections reflect variations in supply known to them rather than induced variations in demand? Alternatively, can we infer that extracting greater promises will result in greater achievement? The critical evidence is that there is an overall response to pressure. Within labor markets of the same industry and region, reviewed contractors do better than the nonreviewed, as other work shows. As discussed here, within a given SMSA the establishments that set higher goals achieve greater growth rates of protected-group employment. My reading of this evidence is that while much of the nitpicking over paperwork is ineffective, the system of affirmative action goals has played a significant role in improving employment opportunities for members of protected groups.

The Targeting of Compliance Reviews

Affirmative action can be broadly conceived of as pursuing either anti-discrimination or job and earnings redistribution goals. That is to say, it can either pursue equality of opportunity or equality of result. Given the historical record, progress toward one goal will often entail progress toward the other. In particular, discrimination seems to be a broad enough target that it can be hit even with imperfect aim. The central question that this section, drawn from Leonard (1985a), seeks to answer is: what are the actual goals of affirmative action? The approach taken here is to infer the ends of affirmative action policy from an analysis of the historical record of actual enforcement.

Assertions concerning the ends of affirmative action are surprisingly common, especially when one realizes that only once in the past has the actual pattern of enforcement been analyzed. This pathbreaking study of Heckman and Wolpin (1976) examined the incidence of compliance reviews at a sample of 1,185 Chicago area establishments during 1972. These compliance reviews are the first, the most common, and usually the last step in the enforcement process. Heckman and Wolpin find that the probability of review is not affected by establishment size, minority employment, or change in minority employment. They discover "no evidence of a systematic government policy for reviewing contractor firms." In other words, they find an essentially random enforcement process. This first analysis of targeting studied a relatively small sample in one city during the early 1970s, before the contract compliance program reached full stride. Do these early findings hold true for the nation as a whole after affirmative action regulations and procedures matured? Just as important, how are such results to be interpreted?

Which establishments does the OFCCP actually choose to review? Can we judge its motives from its targeting policy, and do the goals so revealed conform to those mandated in the executive order? The OFCCP has had, on paper, formal targeting systems such as the Revised McKersie System or the later EISEN system. These systems generally target in a sensible fashion against discrimination by selecting for review those establishments with a low proportion of minorities or females relative to other establishments in the same area and industry. But interviews with OFCCP officials in Washington and in the field suggest that these formal targeting systems were never really used. Instead of targeting on the basis of an establishment's past demographic record, compliance officers claim they simply reviewed the firms with the most employees, and the growing firms. This section shows which types of establishments were actually reviewed between 1974 and 1980, primarily by the Department of Defense. As such, the patterns shown here may not be indicative of current policies or practices of the OFCCP, nor of past practices of their compliance agencies. In addition, part of the patterns observed here may reflect the requirements for pre-award compliance reviews.

The model of affirmative action as an earnings redistribution program has two testable implications. One can at best offer weak support for the hypothesis, while the second can provide somewhat stronger support. The first is that no particular pressure should be applied to firms with relatively few minorities or females, as observed in Leonard (1985a). While this strongly rejects the model of affirmative action as anti-discrimination in employment, if offers weak support for the alternative hypothesis of affirmative action as earnings redistribution because it is also compatible with other models of regulatory behavior. The second implication of the earnings redistribution model is that greater pressure should be brought to bear to shift demand curves where the supply of labor is relatively inelastic. In particular, this implies a higher incidence of compliance reviews at establishments with nonclerical, white-collar-intensive workforces. I find significant evidence that this is what the OFCCP has done.

If one thought of the OFCCP's primary concern as fighting the most blatant forms of *prima facie* employment discrimination directly in the workplace, one might then expect reviews to be concentrated at establishments with a relatively small proportion of females and black males, controlling for size, industry, and region. There is little consistent significant evidence of this in the past. In part, this may be explained by the requirement of pre-award compliance reviews. Establishments with the smallest proportion of minorities or females, *ceteris paribus*, are not consistently more likely to be reviewed for compliance with Executive Order 11246. Reviews are significantly more likely to take place, *ceteris paribus*, in nonclerical, white-collar-intensive establishments. Reviews are also more likely to occur at both large and growing establishments, where any costs to white males are likely to be more diffused.

How can the lack of a consistent targeting pattern by race or sex be explained? The larger establishments often employ a greater proportion of minorities and females. In interviews, field officers of the OFCCP have stated that they do not generally look at an establishment's past demographic record in targeting reviews. Reviewing large nonclerical, white-collar-intensive establishments with little regard for their past record of minority or female employment is consistent with an affirmative action effort that in terms of compliance review targeting is primarily concerned not with attacking the grossest *prima facie* forms of current employment discrimination, but rather with redistributing jobs and earnings to minorities and women.

The 1980s

Black economic advance faltered along a number of dimensions during the 1980s. I do not know how much of this was due to weakened affirmative action, but I do know that affirmative action under the contract compliance program virtually ceased to exist in all but name after 1980 (Leonard 1987). From a public relations perspective, the gutting of the program had a certain artfulness. With no greater staffing or budget, the OFCCP doubled the number of compliance reviews. A wondrously invigorated bureaucracy doubling its efficiency? It is easy to go twice as fast when they are just going through the motions, with more desk reviews and fewer in-depth audits. After 1980, fewer administrative complaints were filed, back-pay awards were phased out, and the already rare penalty of debarment became an endangered species. Over the same period, staffing and real budget were reduced. This type of surface enforcement resulted not just in stagnation, but in a reversal of black advances under affirmative action. Between 1980 and 1984, both male and female black employment grew much more slowly among contractors than noncontractors (Leonard 1987). Affirmative action, such as it was, no longer aided blacks. Consider the different response before and after 1980 of black male employment growth to total establishment employment growth of 10 percent. Before 1980 this would result in 12 percent black male employment growth among noncontractors, and 17 percent among contractors. After 1980, the comparable rates are 11 percent among noncontractors and 10 percent among contractors. The reversal for black females is even more marked.

It was as though contractors were returning to a growth path they had been forced off by previous affirmative action efforts. This is discouraging news. Affirmative action seeks to give those discriminated against a chance to demonstrate their skills, and thus to break the preconceptions upon which prejudicial barriers are based. Under this model, affirmative action should serve as long-term innoculation against discrimination, and previous victims of discrimination should continue to progress even after active treatment has ceased.

The evidence supports far less optimistic views of what is at stake. The decline of black employment advances under the affirmative inaction program of the 1980s suggests either that affirmative action during the 1970s resulted in discrimination against whites, or that ongoing treatment is required to counteract the after-effects of generations of discrimination, or that there is a persistence and resiliency to the taste for discrimination against blacks.

The Impact of Title VII of the Civil Rights Act of 1964

While the central focus of this analysis has been on affirmative action under the Executive Order, it should be understood that the Executive Order has functioned within the backdrop of Title VII's Congressional mandate and substantial legal sanctions. The dominant policy has been established under Title VII. What impact then has Title VII had? Without attempting to review this question as thoroughly as I have affirmation action, I can sketch some results. For a more complete discussion, see Brown (1984a), Freeman (1981), Butler and Heckman (1977), and Smith (1978).

The broadest perspective may be gained by considering what changes have occurred in the earnings, income, occupational positions, and employment of blacks relative to whites before and after passage of the Civil Rights Act of 1964. In reviewing this evidence, Richard B. Freeman (1978, p. 3) finds that "virtually every indicator of positions shows a marked improvement in the economic status of *employed* black workers with—as has been widely noted by various analysts—gains concentrated among women, highly educated or skilled men, and young men. Virtually every indicator of positions also shows a marked acceleration in the economic status of *employed* black workers after 1964, when the U.S. anti-bias effort intensified as a result of Title VII of the Civil Rights Act of that year" (emphasis added). While a substantial part of this improvement can be attributed to the improved education of blacks (see Smith 1978), Title VII appears to have also contributed substantially and directly to improving the economic position of employed blacks at a given level of education.

While employed blacks appear to have approached parity with whites more rapidly since 1964, proportionately fewer blacks pass the initial hurdle of becoming employed. As Freeman (1978, p. 10) notes, "At the same time that there has been a marked movement toward equality of earnings between employed blacks and whites, however, there has been a distressing deterioration in the likelihood of blacks holding jobs, particularly among the young. In 1964 the black male civilian employment/population ratio stood at .73, in 1969 it was .73, and in 1979 it was .64. By contrast, for white males, the ratio went from .78 (1964) to .78

(1969) to .75 (1979). Equally striking, the youth joblessness problem of the decade was one of increasing relative worsening in the black youth positions, for reasons that no one has yet satisfactorily explained. The aggregate data thus tell two stories: improvement for the employed but a reduction in the overall employment rate, especially in the 1970s."

More recently, attempts have been made by Beller (1979) and Leonard (1984c) to measure the impact of Title VII more directly using cross-sectional data. Beller finds some evidence that EEOC efforts have reduced the gender wage gap.

Before 1972, the Justice Department was empowered to bring suit through the courts for enforcement of Title VII's provisions. The EEOC's powers were limited to conciliation and persuasion. Since 1972 the power of litigation has been entrusted to the EEOC which, in turn, can pass it on to individual plaintiffs. By such recourse to the courts, the EEOC can sometimes accomplish in years what takes the OFCCP weeks. What it gives up in speed, though, it sometimes wins back in power through the setting of sweeping legal precedents. For example, the celebrated case of *Griggs v. Duke Power* did not simply aid Griggs or affect only Duke Power. By establishing the principle of disparate impact as *prima facie* evidence of discrimination, it placed a heavier burden on all employers to avoid the appearance of discrimination.

Between 1964 and 1981, more than 5,000 cases of litigation under Title VII, many of which were private suits, were decided in the federal district courts. More than 1,700 of these were class-action suits. These are the tip of an iceberg consisting of cases settling out of court or decided in state courts, but these class-action decisions are likely to generate the most publicity, result in the largest awards, and affect the most people. What has been the impact of this Title VII litigation?

The enforcement of Title VII through the courts has contributed to a significant improvement of the employment and occupational status of blacks. In regressions of the impact of the percentage of workers in an occupation who are members of a protected group on number of Title VII class action suits per corporation, percentage of employment in an industry by state cell that is in federal contractor establishments under the affirmative action obligation, and a lagged dependent variable, Title VII leads to sometimes negative but generally insignificant changes for white females, but to a moderate and significant improvement in the employment of blacks. The demand shifts for females may simply be swamped by the ongoing massive increase in labor supply. In addition, many of the early Title VII cases focused on racial rather than gender discrimination. The apparent ineffectiveness of antidiscrimination policy in promoting female employment remains an interesting question for research. Title VII litigation plays a significant role in increasing blacks' employment share.

In sum, these results suggest that Title VII litigation has played a significant role over and above that of affirmative action. This impact has been greater for blacks than for women, and greater for the skilled than for the unskilled.

Antidiscrimination or Reverse Discrimination?

We have seen that despite poor targeting, affirmative action has helped promote the employment of minorities and women, and that Title VII has likely played an even greater role. This raises the most important and the most controversial question: has this reduced discrimination,or has it gone beyond and induced reverse discrimination against white males? This is also the question on which our evidence is least conclusive. The finding of decreased employment growth for white males is not sufficient to answer the question, since it is consistent with both possibilities.

The integration of the American workforce, by race and gender, has been among the most far-reaching and controversial goals of domestic policy in the past two decades. Some have argued that integration can be achieved only at great cost in terms of reduced productivity and profits, that forced equity will entail reduced productivity. Opponents of affirmative action have argued that employers were discriminating on the basis of merit, not on the basis of race or gender. If their contention is correct, then government policies that favor the hiring and promotion of minorities and women should cause a decline in their relative productivity. Equal pay restrictions will compound the inefficiency. The hypothesis inherent in this argument is that the relative marginal productivities of minorities and females have declined as their employment has increased and have not moved toward equality with relative wages.

Using estimates of production functions relating output to inputs for the manufacturing sector, Leonard (1984c) finds that relative minority and female productivity increased between 1966 and 1977, a period coinciding with government antidiscrimination policy to increase employment opportunities for members of these groups. There is no significant evidence here to support the contention that this increase in employment equity has had marked efficiency costs. The relative marginal productivities of minorities and women have increased as they have progressed into the workforce, suggesting that discriminatory employment practices have been reduced.

If we had observed that relative minority or female productivity fell while relative minority or female wages increased, one might suspect that government pressure under Title VII and Executive Order 11246 (affirmative action) had led to reverse discrimination. I find no significant evidence of reverse discrimination, nor of any significant decline in the relative productivity of minorities or females. Direct tests of the impact of governmental antidiscrimination and affirmative action regulation on productivity find no significant evidence of a productivity decline. These results suggest that antidiscrimination and affirmative action efforts have helped to reduce discrimination without yet inducing significant and substantial reverse discrimination. However, the available evidence is not yet strong enough to be compelling on either side of this issue. Since the productivity estimates are not measured with great precision, strong policy conclusions based on this particular result should be resisted.

Conclusion

The policy of affirmative action has had a short and turbulent history in this country. Of all the social programs that grew during the sixties, it has perhaps enjoyed the least consensus. Its bureaucratic organization and body of regulations have undergone change at frequent intervals since its inception. While the targeting of enforcement could be improved, and while the impact of affirmative action on other groups is still subject to question, the evidence in this study is that affirmative action and Title VII can be successful in promoting the integration of blacks into the American workplace.

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The Uses and Limits of Statistical Analysis in Measuring Economic Discrimination

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This paper begins with a brief discussion of the basic concepts of economic discrimination. In the second part, two case studies of ethnic discrimination from American history illustrate the uses and limits of statistical analysis. (The detailed evidence of discrimination against these groups is presented in the appendix.) The next part deals with current analyses of economic discrimination, and a summary concludes that evidence based on statistical analysis is necessary but not sufficient for establishing the presence of economic discrimination. It must be supported by historical and institutional evidence and interpreted within a theoretical framework.

Background Ideas

Economic discrimination is rooted in the practical matter of an inequity; usually an outcome in which equally productive people receive, on average, different rewards for their efforts. It is useful to distinguish economic discrimination, when referring to the economy as a whole, from labor market discrimination. Discrimination in the labor market may be represented by the example of equally productive groups receiving unequal earnings. In fact, the inequality in earnings is usually a result of unequal access to the better-paying jobs and will show up as inequality in occupational attainment.

The focus on monetary rewards is indisputably narrow and leads to certain anomalies. For example, a finding of equal pay leads to a verdict of no labor market discrimination, but the finding may, and probably does, coexist with plenty of labor market discrimination in the ordinary use of the term. This seeming paradox can be resolved with a simple example. Assume that 10 percent of the workers are a minority group, that no laws bar discrimination, and that 50 percent of the employers discriminate against the minority by paying them less than majority members. All that is needed for the economic verdict of "no discrimination" is a sufficient number of employers who will hire the minority workers on a nondiscriminatory basis, and here the proportion of nondiscriminating employers is relatively large. Examples of legal discrimination could be exposed if minority workers applied for jobs from discriminating employers, but the minority applicants would quickly shift to the employers who do not discriminate and end up receiving equal pay.[1]

The economist's conventional criterion of equal pay even has the embarrassing property of constituting evidence for no discrimination under conditions of complete segregation. The Supreme Court has rejected the doctrine of "separate but equal," but the customary analysis in economics accepts the doctrine. Despite this awkward property, I will focus on income and pay differences between groups as the indicator of economic discrimination. In defense, all I will say is that the money measure is important in its own right, and it does tend to be associated with other measures of discrimination such as segregation by residence or schooling or occupation.

Problems in measuring economic discrimination are revealed by considering its three essential components: (1) the productive capacity of people, which is difficult to measure; (2) an opportunity structure facing the people, which is even more difficult to measure; and (3) the outcomes in the form of income and earnings, which are relatively well measured. The economist's method is to observe the outcomes, compare these for people who are assumed to be of the same productive capacity, and then infer whether the opportunity structure reveals discrimination.

Some examples will illustrate when the worker's opportunity structure implies or does not imply discrimination. Recent immigrants who are unable to speak English and who are less productive for that reason will face restricted employment opportunities. Language facility may well be a justifiable requirement for hiring, but what about the requirement that the worker be a citizen? For long periods in our history, occupational licensing in some states required citizenship for dentists, engineers, master plumbers, and barbers.[2] A barrier based on citizenship is arguably not only discrimination but tends to injure some ethnic groups more than others. In this century Asian immigrants to the United States were for a generation barred from citizenship in some states, notably California.

For another example, assume that workers in a particular ethnic group are untrained and have lower earnings. Their lower earnings suggest, but only suggest, that they are being discriminated against, but just where the barrier to training is located is often difficult to determine. Does the barrier rest with employers, with trade unions, with the educational system, with the workers' upbringing as children? Thus, these workers appear to face some type of discrimination in their economic opportunities, but it may not be labor market discrimination.

The above discussion involves wages and individual workers. The worker is the unit of analysis. I now turn to economic discrimination involving inequality in family income. The family is the unit of analysis. Family income is a fundamental measure of economic well-being and is more comprehensive than wage earnings. Moreover, examining income and the family may help us understand the opportunities and productive capacities of the person. Again, let me illustrate these points with examples.

A mother of young children may be working at a part-time job at a low wage, but her husband's earnings may be high enough to offer her the option of working less in the market than someone who must rely only on her own earnings and who works full time at a higher wage. The mother's low wage is not compelling evidence for labor market discrimination, because she may have high wage opportunities that match her productive capacity, but she does not choose these job opportunities because they require a full-time commitment. Another possible reason for the mother's low wage is that her housework tasks may reduce her productive capacity in the paid labor market because she does not have as much time or energy for market work as someone with less housework.

In this example, the mother's family context is assumed to be causal to her job and wage outcomes. Now consider an example when causation runs in the other direction. Assume that discrimination in the labor market imposes low earnings on a young person or on a mother with young children, and this person has to move in or stay with a larger household of other family members to take advantage of the pooling of resources and the economies of scale in living arrangements. Comparisons of household or family incomes are likely to be more equal than individual incomes, and the family comparisons can hide situations of economic discrimination.

To illustrate, young black men are less likely than young white men to live apart from their immediate family.[3] One reason they continue to live at home is that fewer young black men have good paying jobs. Therefore, they are less able to afford either to live alone or to marry and set up their own households. Table 1 shows, with a hypothetical example, how these living arrangements can understate the true gap between black and white family incomes.

The original family unit is assumed to consist of three persons—the parents and a 22-year-old daughter or son. The black-to-white ratio of the family income of these original units is .75, derived from an average family income of $36,000 for blacks and $48,000 for whites. We do not observe these original family units, however; instead we observe living arrangements in which more 22-year-old whites live apart from their parents than do the 22-year-old blacks. To sharpen the comparison, assume that 50 percent of the young whites and 25 percent of the young blacks live apart from their parents. The observed family incomes show .90 as the black-to-white ratio of family incomes—$28,800 for black families and $32,000 for whites.

Table 1
Family Income Comparisons When Living Arrangements Depend on Labor Market Opportunities
(Hypothetical Example)

Original families	White	Black	B/W ratio
Number	100	100	
Income			
Family	$48,000	$36,000	.75
(Parents)	($30,000)	($24,000)	(.80)
(Daughter or son, age 22)	($18,000)	($12,000)	(.67)

	White	Separate		Black	Separate		
New living arrangements	Together	Parents	Child	Together	Parents	Child	
Number	50	50	50	75	25	25	
Family (household) income	$48,000	$30,000	$18,000	$36,000	$24,000	$12,000	
Average family (household) income	$32,000			$28,800			.90

The simple point of this table is that the gap between black and white income is understated by the comparison of family incomes. A second and more profound point is that the family unit itself, which is a basic unit for income comparisons, is affected by the labor market outcomes and, therefore, affected by discrimination. Discrimination is a cause of the living arrangements of the families. This contrasts with the example of mothers of young children, where the family unit had a causal effect on the labor market outcomes. Causation can run both ways, and one's measure of economic discrimination can be either over- or understated if this is not taken into account.

Two practical conclusions follow from the above examples. (1) The wage of the married woman with young children overstated labor market discrimination for her. Recall, also, that her household income showed no disadvantaged outcome. (2) Labor market discrimination against black youth was correctly measured by their lower wages, but economic discrimination was understated by the comparison of black and white household incomes. These conclusions depend on the particular circumstances of my examples. Later I discuss how the opposite conclusions might emerge from further analyses of these cases.

Measuring Discrimination Between Groups in a Historical Setting

Assume that we adopt the following statistical procedure to measure economic discrimination, if any, against a given ethnic group, using all other native-born whites as the comparison group. First, we classify the families according to the age and rural/urban residence of the primary earner; then we compare the average family income and average per capita income of the two ethnic groups across these classifications. Disparities in income are initial evidence of economic discrimination. To keep matters relatively simple, let us assume that the number of earners per family and family size are approximately the same in the two groups and that those in the ethnic group are all born in the United States. These steps are illustrated with hypothetical numbers in panel A of table 2.

Table 2
Family Income Comparisons by Ethnic Group
(Hypothetical Example)

	Ethnic group X		Whites	
Age	**Urban**	**Rural**	**Urban**	**Rural**
Panel A				
.				
.				
.				
40-49	$20,000	$18,000	$25,000	$20,000
.				
.				
.				
Panel B				
Age by education				
.				
.				
.				
40-49				
<High school	...		...	
High school	$22,000		$23,000	
Some college	...		...	
College grad	$32,000		$32,000	

Another step in the investigation is to subdivide the family groups according to the educational attainment of the primary earner, and then compare incomes within each educational category. If the same income disparities persist, we may view this as stronger evidence of economic discrimination in general and of labor market discrimination in particular. If, however, this statistical control for educational attainment, along with the controls for age and rural/urban residence, do not show income differences, then we have two conventional interpretations. (Note that panel B of table 2 shows almost no difference in the family incomes of the ethnic group relative to the comparison group of native whites.) One interpretation is that the ethnic group's lower educational attainment is the source for their lower incomes, and their lower education reflects social disadvantages that accrued to the ethnic group before they reached adulthood. This view can be interpreted as exonerating the labor market, and employers in particular, from blame for the discrimination.

A second and contrary interpretation is that labor market discrimination is a cause of less education among members of the ethnic group because the market does not sufficiently reward them for additional schooling. Which of these two interpretations is correct is a challenging question. In the case studies that follow, data limitations prevent me from including education in my tabulations.

I would like to carry out the procedure outlined above for two ethnic groups, Irish-Americans and Japanese-Americans, for two years, 1900 for the Irish and 1940 for the Japanese, using the decennial census. If the historians I have read are correct in their descriptions of the economic discrimination that these groups suffered in American history, then the economic statistics from these particular periods should show this.

The 1900 decennial census offers no data on income and earnings, and the 1940 census does not give earnings data for Japanese-Americans. These two censuses do, however, provide limited information about occupational attainment. I use these occupational data to support the proposition that a comparison of incomes in 1900 and in 1940 would show economic discrimination against, respectively, Irish-Americans and Japanese-Americans.

In 1900 the number of descendants of Irish immigrants was large enough to permit reliable statistics on the occupational attainments of those who were born in the United States. Also, within-group marriage was so prevalent that defining who was Irish is relatively unambiguous. Finally, as noted above in referring to the research of historians, it is likely that the Irish-Americans faced discrimination in the labor market during the period around 1900.

The occupational attainment of second generation Irish-American men in 1900 is compared to the attainments of all white men and of second-generation white men.[4] The group of all whites is composed of three ancestry subgroups: (1) 23 percent who were foreign born; (2) 20 percent who were second-generation Americans, that is, sons of foreign-born parents; and (3) 57 percent who were third- or higher-generation Americans, called native whites.[5] As a comparison group for evaluating the economic attainment of the second-generation Irish, all white men probably represent a relatively low standard of economic attainment. Consider that the 23 percent who are foreign born include many who could not speak English and some who were illiterate. Even the Irish-Americans who were born in Ireland were all English-speaking, and virtually all were literate.[6]

My source for the occupational statistics from the 1900 census is E. P. Hutchinson, cited in footnote 5. The occupational categories are not well suited for measuring economic status, but I select certain occupations that should be unambiguous indicators of high or low attainment. For one comparison, independent farmers along with five white-collar occupations (mainly professionals, agents, bookkeepers, merchants, and salesmen) designate high occupational attainment. This assumes that the farmer occupation, which excludes farm laborers, represented higher economic status than most urban jobs in 1900. Three laborer occupations (mainly servants and waiters, other laborers in the service industry, and workers in the low-paying textile industry) designate low occupational attainment.

The 1900 census reported that 33 percent of all white men in the labor force were farmers or were in the five white-collar occupations, compared to 24 percent among the second-generation Irish-Americans. Restricting the comparison to the urban labor force, 18 percent of all white men were in the five white-collar occupations compared to 15 percent of the second-generation Irish. The three laborer occupations contained 18 percent of all white men and 23 percent of the second-generation Irish.

The comparison between second-generation Irish-American men and all second-generation white men gives similar but weaker findings, based mainly on the sharp contrast of representation in the low occupations. Only 14 percent of the second-generation whites were in the three low occupations, compared to 23 percent of the second-generation Irish. The two second-generation groups had similar percentages in farming and in the five white-collar occupations.

The statistics in the above two paragraphs show a lag in the occupational attainment, and presumably in the incomes, of the second-generation Irish compared with other white Americans. (Further details and citations for these comparisons are given in appendix.)

The article on the Irish in the *Harvard Encyclopedia of American Ethnic Groups* gives a more pessimistic picture of the occupational attainments of Irish-Americans. Patrick J. Blessing states that the Irish "were the only immigrant group whose occupational mobility during the late 19th century appeared almost as small as that of American blacks. . . . Their . . . record of movement up the occupational scale [was] dismal."[7] Although the occupational statistics from the 1900 census do not seem to me to justify this judgment, which may have referred to the Irish experience in Boston, I conclude that the statistical analysis supports the verdict of discrimination against Irish-Americans at this period in our history.

In 1940 nearly all the Japanese-Americans in the United States lived in the four western states of Arizona, California, Oregon, and Washington, with about 85 percent in California. The first generation had immigrated to the United States between 1890 and 1920. By 1940, almost two-thirds of the Japanese-Americans were born in the United States. There is abundant evidence that they faced severe social and legal discrimination, especially in California. Again, however, statistical evidence on how this discrimination affected their incomes and earnings in 1940 is not directly available. Instead, I compare the occupations of second-generation Japanese-American men in the four western states with the occupations of all white men in California.

The occupations in 1940 are defined in modern terms, permitting a rough ranking by skill, although there are the customary distinctions between the white-collar occupation "clerical and sales" and the blue-collar occupation "craftsmen" where a ranking according to skill is uncertain. To measure the occupational attainment for the two groups, white men and second-generation Japanese-American men, I calculate average earnings for each of the two groups as follows. First, the median wage and salary earnings of each occupation is assigned to that occupation as a cardinal measure of its rank. There are 11 occupational categories, with professionals ranked highest and domestic servants ranked lowest according to the earnings measure. Second, the percentage of each ethnic group in the occupation is multiplied by the occupation's median earnings, and the sum of these products gives an average earnings for each ethnic group, although for the Japanese-Americans the average uses the occupational earnings of all the workers, who are 95 percent white.

The ratio of this dollar-valued occupational attainment of Japanese-Americans to that of all whites is .92, implying a moderate lag in the attainments of Japanese-Americans. The ratio is probably upwardly biased. The method assumes that the earnings of Japanese-Americans and whites are the same within an occupation. Another source of bias is that second-generation Japanese-Americans had more education than whites in 1940, indicating that a control for educational attainment would show a lower ratio than .92. (The details of the above calculations and arguments are given in appendix.)

Let us assume, then, that a comparison of incomes in 1940 would reflect these findings about occupational differences between whites and second-generation Japanese-Americans. We may conclude, therefore, that the statistical analysis again supports a verdict of discrimination.

If we carry out income and occupational comparisons for the same two ethnic groups in 1970 and 1980, however, we find that the Irish- and Japanese-Americans have higher income and higher occupational and education attainment than other white Americans. This claim is stronger and clearer for Japanese-Americans, who have sharply higher family or per capita incomes than comparable native white Americans.

In Table 3, two comparisons are shown for family income.[8] For married-couple families the income of Japanese-Americans is 47 percent higher than that of non-Hispanic whites; 26 percent higher if we look at just the primary earner's income. Not shown is a more technical analysis in which the incomes are standardized for age, education, marital status, and region of residency of the primary earner. With these characteristics taken into account there remains an 8 percent advantage in favor of Japanese-Americans. The last part of the table shows higher occupational attainments of Japanese-Americans.

Table 3
Income and Occupational Attainment of American-Born Japanese and Non-Hispanic White Americans, 1980

	Japanese-Americans	Non-Hispanic White	Ratio J/W
Average income of married-couple families	$41,700	$28,300	1.47
Average income of married-couple families excluding income of family members other than the primary earner	$26,900	$21,300	1.26
Occupations: Percentage in			
(a) Professional, technical, sales and administrative	54%	44%	1.23
(b) Operators, fabricators, laborers, unemployed	13%	25%	.52

SOURCE Harriet Orcutt Duleep, "The Economic Status of Americans of Asian Descent An Exploratory Investigation," U.S. Commission on Civil Rights, Clearinghouse Publication 95, October 1988, pp. 35, 70, 73.

The evidence for higher incomes of Irish-Americans is not so strong, and the amount of their advantage is not so large. By 1970 the family incomes of men who reported Irish ancestry were about 5 percent above that of other white families.[9] Also, 48 percent of the men were in white-collar occupations, compared to 43 percent of other white men. One problem in measurement here is that Irish ancestry is defined by both parents being Irish. But by 1970, intermarriage between Irish-Americans and persons of other ancestry was common, so there is a selection of those who are recorded as Irish that lends an unknown bias to the income and occupation comparisons.

One reason why the economic success of Irish-Americans in overcoming discrimination is understated during this century is that discrimination was mainly against the Catholic Irish, and today the incomes and educational attainments of Irish Catholics are greater than for the Irish as a whole.[10]

We now have a puzzle, or maybe the right word is dilemma. If we accepted the 1900 and 1940 statistical evidence as supporting a verdict of discrimination against these two ethnic groups, then how should we interpret the 1970 and 1980 evidence? Does the latter imply discrimination in favor of Irish- and Japanese-Americans in contemporary America? Was there reverse discrimination in 1970 and 1980? If we dismiss this interpretation, should we then call into question our verdicts of discrimination in 1900 and 1940? Our investigatory procedures should be consistent. I believe, and this is my principal theme, that consistency is achieved by supplementing the statistical evidence with institutional and historical evidence and with theoretical analysis. Indeed, my preference is to consider statistics as supplementary to the institutional-theoretical analysis.

The limitations of space and of my knowledge about the history of ethnic groups in America prevent an extensive discussion about how we should interpret the potentially inconsistent evidence presented above. The case of Japanese-Americans, however, appears to offer a straightforward reconciliation in the light of several well-known historical facts.

I claim that the statistical evidence supports the verdict of discrimination in 1940 and a verdict of no "reverse discrimination" in 1980. The reasons for the conclusion about 1940 are easiest. The record in the United States of legal and social persecution of Japanese immigrants and their offspring is astounding and appalling, culminating in the effective robbery of much of their land and wealth in 1942 when almost all Japanese-Americans were imprisoned in concentration camps.[11] Their lower incomes in 1940 reflect, as we see with subsequent evidence, discriminatory barriers rather than voluntary choices or any innate incapacity for economic success.[12]

The explanation for their economic success since the end of World War II, shown by the income statistics for 1980, is not so easy. They have benefited by living in the most prosperous part of the United States, the West Coast, especially California. Also, there were, apparently, two strong selective forces at work on the Japanese-American population. One is that the Japanese government selected the immigrants who went to the United States, beginning around 1890 and continuing until 1920 or so.[13]

A second selective factor is that about 50 percent of the immigrants returned to Japan.[14] A natural inference is that the most successful stayed in the United States, and supporting testimony is given by Dorothy Swaine Thomas: "At the time of the Immigration Commission's investigations in 1908-1909, a majority of all classes [of the Japanese-Americans] interviewed either expected to return to Japan or were undecided about their future place of residence. The proportions indicating that they had decided to become permanent residents of the United States were, however, highest among those who had 'succeeded in rising from the ranks of the laboring classes.' "[15]

We could, of course, appeal to various theories about the special work ethic and efficiency of the Japanese people to explain their economic achievements. In the case of the Japanese-Americans, however, these theories are not needed.

Fortunately, today we have data and tools of analysis that permit us to use both statistical and institutional-theoretical methods to analyze discrimination. Unfortunately, both methods are inherently imprecise, and reasonable people can disagree about the uses and interpretations of the evidence. I turn next to the current use of statistical evidence to measure labor market discrimination.

Statistical Models of Wage Discrimination

One of the earliest econometric studies to measure labor market discrimination against women was by Henry Sanborn and based on data from the 1950 census. Sanborn concluded that the wages of women were only moderately lower than those of men of the same region of residence, age, education, and occupation.[16] In 1973, a study by James D. Gwartney and Richard Stroup based on the 1960 and 1970 censuses found a sizable gender wage gap and extensive discrimination against women workers.[17]

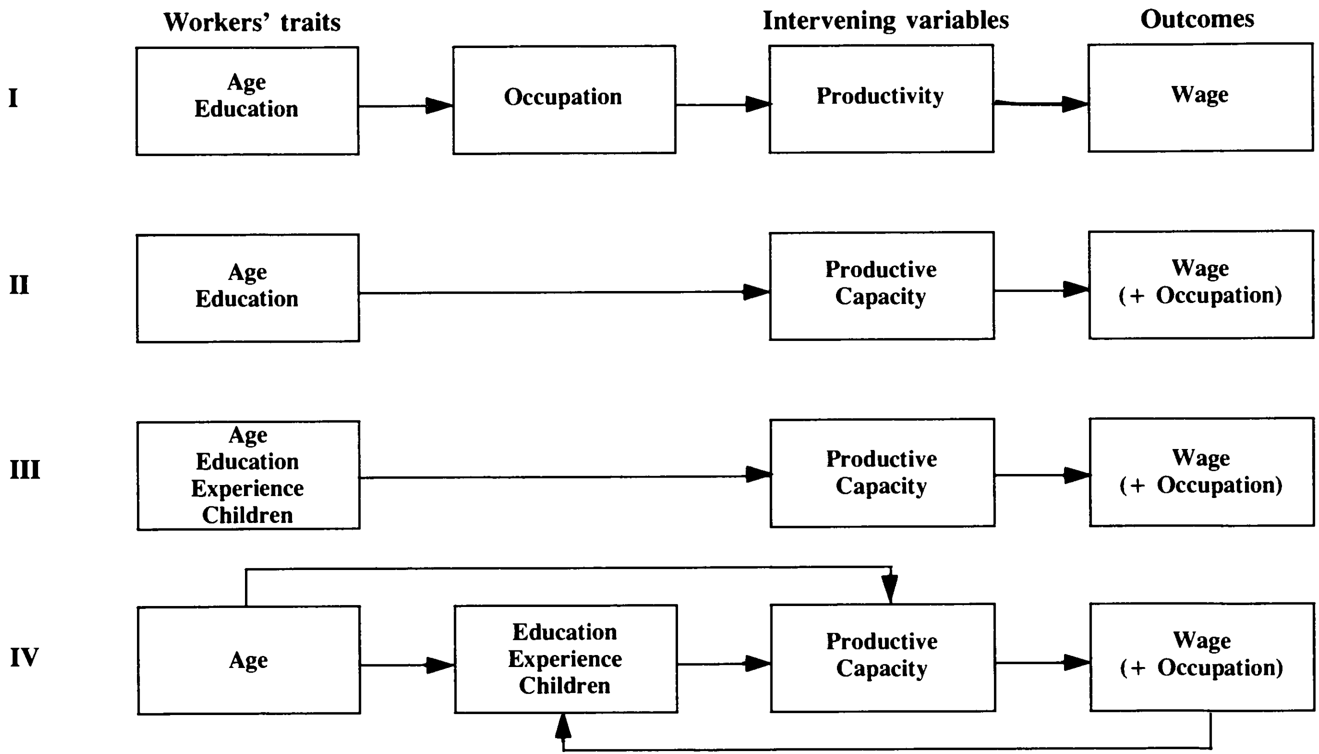
The different conclusions had nothing to do with the different years for the data sources. Instead, there are reasons for believing that the first study understated, and the second study overstated, labor market discrimination—defined as unequal pay for the same productive capacities. The early study by Sanborn compared the wages of men and women in the same occupation, but because barriers to occupational entry are the most important form of labor market discrimination, this study surely understated it. A diagram of this model is shown in the first row of figure 1. By controlling for occupation in the statistical analysis, the researcher may be said to have "overcontrolled."

The models shown in figure 1 are deliberately simplified and are intended to serve pedagogic purposes. They should not be viewed as representing the precise models used in the research literature I cite. With this qualification in mind, let us interpret Model I. Arrows denote causal paths. The right-side column headed "Outcomes" is self-explanatory, except for the important distinction between Model I, where only the wage is listed, and the other models, which treat occupation as another outcome that measures labor market success or failure. The conventional economic proposition that workers' wages are determined by their productivity is represented in column 3 (which is the second of two columns under the heading "Intervening Variables"). A distinction is made between "productivity" in Model I, which is associated with the occupational skills of the worker, and "productive capacity," which determines, among other things, the worker's ability to enter various occupations. Once workers are in a particular occupation, their productivity may be enhanced by on-the-job training specific to that occupation.

The first column lists variables or traits of workers that may sometimes be assumed to be exogenous to the workings of the labor market. In the case of education, the assumption I adopt for convenience in Models I-III is that education is determined before the person enters the labor market and is unaffected by the operation of the labor market.

Model II in figure 1 describes the assumptions behind the 1973 study by Gwartney and Stroup that showed a large gender wage gap. The 1973 study, however, did not allow for the difference between men and women in their years of experience in the labor market—a gap which is related to the two careers, home and market, of many women. Without controlling for labor market experience, the observed lower average wage for women probably overstates labor market discrimination against women.

Figure 1
Analytic Models of Labor Market Discrimination: Women
(Arrows denote causal paths)



Later studies of the gender gap in wages allowed for the effects of the woman's previous employment experience either indirectly, by including a fertility variable, or with a variable that directly measured the woman's previous years of labor market experience.[18] (See Model III in figure 1.) The gender gap in wages was much smaller in these studies. In my view, however, accounting for women's dual careers by statistical methods is an intractable problem in measuring labor market discrimination. Let me try to explain my view.

Recall the two sources of complexity caused by women's dual careers: first, that their choice of a less demanding job may be voluntary, perhaps as a consequence of their total family income; second, that the housework demands on their time and energy reduce their productive capacity in the paid labor market. These interpretations rationalize statistical strategies that include the following sorts of control variables when comparing women's and men's wages: full- or part-time work, years of experience in the paid labor market, numbers and ages of children, and marital status.

These control variables are usually interpreted to be explanations for the lag in women's wages that was otherwise attributed to labor market discrimination. This conclusion, however, may be challenged with an alternative interpretation that is based on the mutual causation between women's wages and the variables measuring their productivity. In this model (IV in figure 1), the restricted opportunities for women in the labor market that are attributable to discrimination are causal to their concentration on housework at the expense of market work. Statistical analysis can measure associations, but it cannot determine causation, at least not without a supporting theoretical rationalization.

This theoretical point about mutual causation may be explained without mentioning labor market discrimination. During recent decades, employment opportunities in the labor market have improved for women, and women have postponed their age of first marriage, had fewer children, and increased their rates of marital breakup. But what is cause, and what is effect? Was the decision to have fewer children independent of what was occurring in the labor market, and did increased market work by women then follow the decline in the birth rate? Or were the improved wage and job opportunities in the labor market causal to the decision to have fewer children? Economists have not been successful in identifying and quantifying the causal forces in these events. It is even more difficult to determine the additional causal role of discrimination in the labor market in these outcomes.

Summary

I am pessimistic about the power of statistical methods to determine and measure economic discrimination. We are not sure what variables should be used as control variables in the analysis. If relevant causal variables are omitted, the model "undercontrols" and, therefore, overstates economic discrimination. If, however, the control variables are themselves effects of labor market discrimination, then they should not be included in the model; this is the problem of "overcontrolling," which leads to an understatement of economic discrimination.

These statements are expressions of humility but not of despair. We can take a lesson from the historical studies, such as those alluded to above concerning Irish-Americans and Japanese-Americans. We need a theoretical framework supported by knowledge about the institutional and historical factors. In the modern context of assessing discrimination by employers and labor unions, we need to study the histories of the firms and unions to try to determine motivations and intentions. Statistical methods are indispensable in the task of measuring labor market discrimination, but they are still only one component of the analysis.

Appendix

The Evidence for Economic Discrimination Against Irish- and Japanese-Americans in 1900 and 1940

In the text of this paper I assumed the following hypothetical proposition. If we had for 1900 and 1940 the type of economic data that we have had since, say, 1960, we would be able to show economic discrimination against Irish-Americans in 1900 and against Japanese-Americans in 1940 by conventional methods of economic research. The evidence mentioned in the text to support this proposition is admittedly meager. I doubt that the necessary data exist from these earlier years for applying conventional methods. This appendix discusses in more detail the evidence that is available. First, a theoretical point.

The Economic Theory of Labor Market Discrimination

The point was made in the text that merely documenting examples of employer discrimination against a minority group is not sufficient to indicate that the incomes or earnings of the minority group are lower than those of the majority group for workers of the same productive capacity. The documentation is necessary for a verdict of economic discrimination, because it provides the historical and institutional evidence for how discrimination occurred. Statistical evidence showing lower earnings of the minority group is also necessary, however.

In the case of Irish-Americans at the turn of this century, for example, it is not enough to refer to the legacy of the infamous signs, "No Irish Need Apply." Knowing that some, even many, employers discriminated against the Irish does not tell us that the employers who did not were too few to enable Irish workers to earn a wage equal to that of other workers with their productive capacity.

In the hypothetical example of the text, where minority workers were 10 percent of the workforce, and half of the employers did and half did not discriminate against the minority group, the claim was that competitive forces would secure pay for the minority workers in accordance with their productive capacity. The reason is that the same competitive forces that tend to equate the wage and productivity of majority workers would accomplish this for the minority workers. In other words, we should expect that the labor demand for minority workers by the 50 percent of employers who do not discriminate will provide enough bidding to ensure the same competitive solution for the minority group.

It is important to note that a large percentage of employers, relative to the percentage that the minority group constitutes, is not necessary to achieve a nondiscriminatory outcome. The argument runs as follows. Assume that only a few employers do not discriminate against the minority group. They will hire the minority workers because, unlike the discriminating employers, they suffer no nonpecuniary disutility from employing minority workers. At the outset, the nondiscriminating employers have no incentive to pay the minority workers any more than their market wage, which, by assumption, is less than the prevailing wage paid to workers in the majority group. By employing the equally productive but lower-paid minority workers, the nondiscriminating employers will make extra profits, and, to repeat a point, they suffer no disutility from employing the minority workers. The nondiscriminating employers will expand production in response to their extra profits, and this increases the demand for and wages of minority workers.

The discriminating employers, who are losing their share of the market output and losing their minority workers, will be forced to raise the wages of the minority workers if they want to keep them. In any case, the bidding for the labor of minority workers by nondiscriminating employers will continue to raise the wages of the minority workers until their wage equals that of the majority workers. Only at this point will excess profits disappear, permitting an equilibrium allocation of the share of output among the employers.

The point of this argument is that a comparison of earnings of minority and majority workers is needed to tell us whether the demand for labor by employers and consumers has produced a discriminatory outcome by the economist's definition. Recall, however, that some employers may be discriminating in the legal sense even though the market shows equality in earnings of the two groups.

Available Data on Irish-Americans

In view of the lack of data on incomes, how might we measure the economic status of Irish-Americans around the turn of the century? Several historical works have examined the occupational attainments of Irish-Americans in specific cities. Stephan Thernstrom, for example, reports relatively slow progress in occupational attainment by the Irish in Boston in the period around 1900.[19] Andrew M. Greeley argues, however, that the historical record in Boston understates the occupational achievements of the Irish in the United States as a whole.[20]

Nationwide data on the occupations of the labor force from the Bureau of the Census seem to me to be our best source. From 1870 to 1900, the decennial censuses reported the occupations of American workers classified by nativity and country of origin. This information is summarized in the book, cited in footnote 5, by E.P. Hutchinson. Unfortunately, the occupational classifications used for those censuses were based mainly on the workers' industry. Hutchinson commented that, "The primarily industrial basis of classification largely conceals whatever characteristics of skill or occupational status the . . . [worker] may have had."[21] For example, in the 1900 census, the occupation of "iron and steel workers" includes unskilled and skilled workers.

Despite this problem, I am forced to use the 1900 occupational classifications instead of those in the 1910 census which do correspond to our current occupational classifications, because the 1910 census did not report the country of origin of the workers. In fact, the 1950 census is the next one to provide occupational data for workers according to their country of origin.

Although the 1900 occupational classifications do not, in general, permit a ranking by skill, there are several high-status and low-status occupations that clearly correspond with economic status. (Unless otherwise noted, the statistics that follow are from Hutchinson, pp. 172-175.) From 34 listed occupations from the 1900 census, I select the following five high-status occupations: (1) professional service, (2) agents, (3) bookkeepers and accountants, (4) merchants and dealers, and (5) salesmen. Occupations 2-5 are all contained in the "trade and transportation" industry. A large and relatively high-status occupation in 1900 is that of "farmers, planters, and overseers." Agricultural laborers are excluded, so this farm occupation probably has a higher status than the occupations of most urban workers. The low-status occupations that I selected are (1) servants and waiters, (2) other laborers, both from the "domestic and personal service" industry and (3) "textile mill operatives," selected because the textile industry was the lowest-paying manufacturing industry.[22]

The occupational data from the 1900 census report whether the worker was born in Ireland, designating a first-generation Irish-American, or has foreign-born parents, designating a second-generation Irish-American. The Irish-American male workers are compared to all white male workers and to all second-generation white male workers. Table A.1 summarizes the occupational statistics for these four groups. As noted in the text, in 1900 the all-worker group was composed of native workers (57 percent), foreign-born workers (23 percent), and second-generation foreign workers (20 percent).

The first evaluation of the occupational attainments of second-generation Irish-American males compares them with all white males. Row 3 of table A.1

Table A.1
Occupational Distribution of Selected Occupations for Male Irish-Americans and All White Males, by Nativity, 1900

Occupational groups	Ethnic group			
	All Whites	2nd-Generation Whites	2nd-Generation Irish-American	1st-Generation Irish-American[a]
In total labor force:				
1. Farmers, planters and overseers[b]	22	13	12	12
2. Five high occupations[c]	11	12	12	8
3. Sum of 1, 2	33	25	24	20
In urban labor force:				
4. Five high occupations[c]	18	16	15	10
5. Three low occupations[d]	18	14	23	42

SOURCE. E.P. Hutchinson, *Immigrants and Their Children, 1850-1950* (New York John Wiley and Sons, 1956), pp 159, 172-174

a. 1st-generation is the same as foreign-born

b Does not include agricultural laborers

c. Professionals, agents, bookkeepers and accountants, merchants and dealers, salesmen (The latter four are in the trade and transportation industry)

d Laborers, servants and waiters (both groups from the domestic and personal service industry), textile mill operatives shows that 24 percent of the second-generation Irish are in the farmer occupation and the five high-status (white-collar) occupations, and the corresponding figure for all whites is 33 percent. In the urban sector, 15 percent of the second-generation Irish are in the five high-status occupations and 23 percent are in the three low-status occupations. They compare unfavorably to the urban occupational attainments of all whites—18 percent in the five high-status occupations and 18 percent in the three low-status occupations.

Another comparison is between the second-generation Irish and the second-generation of all whites. The two groups had nearly the same percentage, 24 and 25, respectively, in the combined farmer and five high-status occupations. In the urban sector, the occupations of the second-generation whites show somewhat higher attainments: 16 percent are in the five high-status occupations and only 14 percent are in the three low-status occupations, compared with 15 and 23 percent, respectively, for the second-generation Irish. The occupations of the first-generation Irish are considerably lower in all comparisons.

Available Data on Japanese-Americans

The 1940 census publications included a special report that gives demographic, educational, and occupational information, but no wage and salary data, for Japanese-Americans by country of birth.[23] The data cover the four western states, Arizona, California, Oregon, and Washington, where nearly all Japanese-Americans lived. The occupations are limited to 11 broad categories. Another problem is the small population of Japanese-Americans in 1940. Of the total of 127,000, 63 percent (80,000) were born in the United States, but 50,000 of the latter were less than 20 years old. As a result, there were only 15,000 second-generation Japanese-American workers in 1940. By contrast, there were over one million second-generation Irish-Americans in the labor force in 1900.

Adding to the difficulty of using the occupational data to evaluate the economic attainments of Japanese-Americans are the following problems:

(1) About 14 percent of the second-generation Japanese-American men and 5 percent of white men worked in agriculture. In 1940, unlike 1900, we cannot assume that farmers have higher incomes and economic status than most urban employees, so I exclude farmers from the occupational comparisons. Farm laborers are included because the low wages in this occupation are a clear indication of its low rank.

(2) Second-generation Japanese-American workers were, on average, much younger than white workers. Because occupational attainment depends on

age, the occupational comparison needs to take account of the age differences in the two populations.

(3) Two occupations, "proprietors, managers, and officials (excluding farmers)" and "clerical, sales, and kindred workers" are likely to consist of jobs with lower status and lower workers' incomes among the second-generation Japanese-Americans than among white workers. Dorothy Swaine Thomas reports that, among the Japanese-Americans, "the personnel of so many enterprises consisted merely of an Issei [first-generation] 'entrepreneur' and his cooperating relatives. . . . Thus, the concentration of Nisei [second-generation] males at 'white-collar' levels . . . may be interpreted to mean that many of those classified in the proprietor/managerial group were in fact working in secondary positions in the larger, Issei-controlled enterprises, and that most of those classified in the clerical/sales category were, similarly, working for other Japanese. The few who had progressed beyond the limits of the Japanese business community were, for the most part, on low rungs of the urban occupational ladder and held the less desirable jobs."[24]

Each of the problems listed above is addressed below in the comparisons of occupational attainments of Japanese-American and white workers.

The 1940 census included, for the first time, wage and salary information for the labor force, and this permits a quantitative economic scale for the occupations. (No data on occupational earnings are available for Japanese-Americans, however.) Given the concentration of Japanese-Americans in California (about 85 percent lived there), I use the occupations and wages of male workers in this state, 95 percent of whom were white, to construct a dollar value for the occupational attainments of the white and Japanese-American workers. Farmers are excluded, as noted above, and the median wage and salary earned by "professional workers" is assigned to the "proprietors, managers, and officials" because income data from self-employment were not collected.[25]

The occupational distributions and median earnings are shown in table A.2. An average earnings of white workers, excluding farmers, is calculated by multiplying the median earnings of each occupation by the percentage of white workers in the occupation and then summing the products. (To be precise, the median earnings are for workers who worked 12 months in 1939.) This average, shown in table A.2 to be $1,646, is a dollar measure of the occupational attainments of white workers.

The same method is used for evaluating the occupational attainments of second-generation Japanese-American workers. Their occupation percentages are multiplied by the white median earnings in each occupation. Thus, the dollar measure of the occupational attainments of Japanese-Americans assumes that

Japanese-American and white workers in the same occupation received the same earnings. As shown in table A.2, the ratio of the dollar value of the Japanese-American occupational attainments to that of white workers is .87 (=1435/1646).

A second ratio of the two groups' occupational attainments uses the same earnings figures, but the occupational distribution of the Japanese-Americans who lived in the states of California and Washington in 1940 is adjusted to match the age distribution of the entire population of workers in these states. (About 90 percent of all Japanese-Americans lived in these two states in 1940, and about 95 percent of the entire population in the two states was white.) The age-adjusted occupational distribution of Japanese-Americans is taken from Thomas.[26] The method may be explained with a simple example.

Assume that 5 percent of the Japanese-Americans over 35 years of age, and 2 percent of those under 35 years of age, were professionals, and that 80 percent of the Japanese-American population of workers were under 35. Thus, their overall percentage professional is 2.6 percent (=.8 X .02+.2 X .05). Assume the white population has 50 percent of its labor force over 35. Then if the Japanese workers had the same age distribution as whites, 3.5 percent (=.5 X .02+.5 X .05) would be in the professional occupation. The age-adjusted percentage of professionals for the Japanese-Americans is, therefore, 3.5 percent.

The ratio of the dollar value of the Japanese-American occupations to that of the white workers, adjusting for age, is .97 (=1601/1646). The ratio without the age adjustment, .87, is biased down because of the younger ages of the second-generation Japanese-Americans. The ratio of .97 is biased up because of Thomas's point about the lower status and earnings of the large age-adjusted percentage (44.6) of Japanese-Americans in the proprietors and clerical/sales occupations, relative to the status and earnings of whites (28.6 percent) in these occupations. Both ratios are probably biased up because the calculation assumes the same median earnings of Japanese-Americans and whites within each occupation. Impressionistic evidence suggests that the earnings of Japanese-Americans were lower than those of whites. I simply averaged the two ratios and used .92 in the text to measure the lag in occupational attainment of Japanese-Americans.

Another reason why the occupational measure may understate discrimination against second-generation Japanese-Americans in 1940 is that it does not allow for their higher educational attainment relative to whites. Thomas reports an age-adjusted distribution of years of school completed for the second-generation Japanese-Americans who were 25 years of age or older.[27] Her data show that the median years of school completed in 1940 was 11.2 for the Japanese-American males and 10.6 for all males.

Table A.2
Occupational Distribution of White Males and Second-Generation Japanese-American Males Evaluated by Median Earnings of the Occupations, 1940

Occupation	Median earnings of occupations in California[a] (1)	Percentage in occupation: All white males California[a] (2)	Percentage in occupation: Japanese-Americans, 2nd-generation, Reported (3)	Percentage in occupation: Japanese-Americans, 2nd-generation, Adjusted[b] (4)
Professionals and semiprofessionals	$2,263	7.9	2.5	
		[8.3]	[2.9]	[4.2]
Farmers and farm managers	--	5.0	13.8	--
Proprietors, managers, and officials (excluding farms)	$2,263	13.0	7.3	
		[13.7]	[8.5]	[14.0]
Clerical, sales, and kindred	$1,680	16.8	16.0	
		[17.7]	[18.6]	[30.6]
Craftsmen, foremen, and kindred	$1,730	17.6	2.4	
		[18.5]	[2.8]	[4.3]
Operatives and kindred	$1,543	16.8	8.9	
		[17.7]	[10.3]	[16.4]

Service workers, except domestic	$1,176	8.7 [9.1]	3.6 [4.2]	[6.5]
Domestic service	$ 811	0.2 [0.2]	3.0 [3.5]	
Laborers, except farm	$1,276	6.1 [6.4]	33.0 [38.3]	[24.0]
Farm laborers	$ 820	7.8 [8.2]	9.5 [11.0]	
Earnings, averaged over occupations, excluding farmers (weighted by occupation percentage)		$1,646	$1,435	$1,601

SOURCES Columns 1-2 U S Bureau of the Census, *16th Census of the United States, 1940, Population, vol III, The Labor Force*, Part 2, Reports by States, California (Washington, D C U S GPO, 1943), pp 232-233, 278-281 Column 3 U S Bureau of the Census, *16th Census of the United States, 1940, Population*, "Characteristics of the Nonwhite Population by Race" (Washington, D C U S GPO, 1943), pp 107-109 Column 4 Dorothy Swaine Thomas, *The Salvage* (Berkeley, CA University of California Press, 1952), p 600

NOTE The bracketed percentages exclude the occupation of "farmers and farm managers "

a Because about 85 percent of the second-generation Japanese-Americans lived in California, the occupational distribution and median earnings-by-occupation of California males are used for the comparisons About 95 percent of the Californian male workforce was white The median earnings are derived from the "wage and salary" earnings for workers in these occupations who worked 12 months in 1939 The "farmer" and "proprietors, etc." occupations have no meaningful earnings reported For "proprietors, etc ," the median earnings of the "professional" occupation are assigned See appendix text for the justification

b The second-generation Japanese-Americans are, on average, younger than all males Using the all-male age distribution of the states of Washington and California, Dorothy Swaine Thomas calculated an age-adjusted occupational distribution of the second-generation Japanese-Americans The age adjustment assumes the same age-specific occupational percentages of the Japanese-Americans but applies to those percentages the all-male age distribution See appendix text for further explanation

The educational advantage of the Japanese-Americans, therefore, did not translate into an occupational advantage. This leads to the observation by Thomas that among the Nisei, "Engineers, accountants, teachers, and social workers found it almost impossible to practice the skills they learned."[28] Supporting this point are the following amazing statistics reported in another study: among male Japanese-American college graduates who entered the labor force before 1942, only 10 percent went into professional jobs. In the 1950s, by contrast, about 70 percent of Japanese-American college graduates entered professional occupations.[29] All this supports the conclusion that second-generation Japanese-Americans faced considerable economic discrimination in the period around 1940.

NOTES

1. See appendix for a fuller explanation of how employer discrimination can coexist with the economist's finding of no labor market discrimination

2. Reed Ueda, "Naturalization and Citizenship," in *Harvard Encyclopedia of American Ethnic Groups*, ed Stephan Thernstrom (Cambridge: Harvard University Press, 1980), pp 740-742.

3 Glen G Cain, "Black-White Differences in Employment of Young People An Analysis of 1980 Census Data." Institute for Research on Poverty Discussion Paper No 844-87, University of Wisconsin-Madison, 1983.

4 Appendix describes the use of census and other data from 1900 and 1940 to measure economic discrimination against Irish-Americans and Japanese-Americans.

5 E.P. Hutchinson, *Immigrants and Their Children, 1850-1950* (New York. John Wiley, 1956), p. 159

6. Robert Higgs cites statistics from the 1910 report of the Immigration Commission of the U.S Congress that show that the immigrant (foreign-born) Irish-Americans who were surveyed were 100 percent English-speaking and 96 percent literate See Higgs, "Race, Skills, and Earnings· American Immigrants in 1909," *Journal of Economic History* (June 1971), pp 420-428

7. Patrick J Blessing, "Irish," in *Harvard Encyclopedia of American Ethnic Groups*, ed. Stephan Thernstrom (Cambridge Harvard University Press, 1980), p 531

8 Table 3 and the statistics comparing Japanese-Americans and white Americans in this paragraph are from Harriet Orcutt Duleep, "The Economic Status of Americans of Asian Descent An Exploratory Investigation," U S. Commission on Civil Rights, Clearinghouse Publication 95, October 1988, pp 35, 70, 73

9 The statistics in this paragraph are from U S Bureau of the Census, Current Population Reports, Series P-20, No 249, *Characteristics of the Population by Ethnic Origin March 1972 and 1971* (Washington, D.C : U S GPO, 1973)

10 This is a point forcefully made in two books by Andrew M Greeley *That Distressful Nation* (New York Quadrangle Books, 1972), and *The Irish Americans* (New York Harper and Row, 1981)

11. Although the official justification for the confinement of Japanese-American citizens who lived on the West Coast was that they were a military threat, there was no evidence then or later to support this allegation. Persuasive reasons for their imprisonment are (1) the history of racial hostility toward Japanese-Americans, especially by white Californians, (2) the opportunity for whites to acquire assets of Japanese-Americans when they were rushed to the concentration camps and had to leave their belongings behind or sell at severe losses; and (3) the economic gains of various white producer groups such as farmers or small businessmen, who competed with the Japanese-Americans in these businesses No German-Americans or Italian-Americans were put in concentration camps, so it is hard to deny that the basic source of this treatment of Japanese-Americans was racial discrimination

12. A study by the Carnegie Corporation during the 1930s reached the same conclusion " the Nisei [second-generation Japanese-Americans] were as 'bright' as Caucasians as measured by I.Q., their rates of crime and delinquency were low, and their records of achievement in school were extraordinary The study found that race prejudice, not low achievement, was the fundamental cause of the Nisei's employment problems" (Harry H L Kitano, "Japanese," in *Harvard Encyclopedia of American Ethnic Groups*, p. 565)

13. Positive selectivity, with respect to productive skills, among the Japanese immigrants is stressed by Thomas Sowell, *Ethnic America: A History* (New York. Basic Books, 1981)

14. Charles A Price, "Methods of Estimating the Size of Groups," in *Harvard Encyclopedia of American Ethnic Groups*, pp. 1036-1039

15. Dorothy Swaine Thomas, *The Salvage* (Berkeley University of California Press, 1952), p. 45.

16 Henry Sanborn, "Pay Differences Between Men and Women," *Industrial and Labor Relations Review* 17 (1964), 534-550.

17. James D. Gwartney and Richard Stroup, "Measurement of Employment Discrimination According to Sex," *Southern Economic Journal* 39 (1973), 575-587

18 Jacob Mincer and Solomon Polachek, "Family Investments in Human Capital of Women," *Journal of Political Economy* 82, Part 2 (1974), S76-S108, Mary Corcoran and Greg J Duncan, "Work History, Labor Force Attachment, and Earnings Differences Between the Races and Sexes," *Journal of Human Resources* 14 (1979), 497-520.

19 Stephan Thernstrom, *The Other Bostonians* (Cambridge· Harvard University Press, 1973) See especially pp 135, 143, and 186-194

20 Greeley, *The Irish Americans*, p. 111

21 Hutchinson, *Immigrants and Their Children*, p 86

22 Industry wage levels for 1900 are reported in U S Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Bicentennial Edition, Part 1 (Washington, D C U S GPO, 1975), p 172.

23 "Characteristics of the Nonwhite Population by Race," U.S Bureau of the Census, *16th Census of the United States, 1940 Population*, U S. Bureau of the Census (Washington, D C , 1943)

24. Thomas, pp 40-42

25 The 1950 census reported incomes in addition to wages, and in the census monograph *Income of the American People*, by Herman P Miller (New York John Wiley, 1956, p 51), the incomes of the "proprietor, manager" occupation are shown to be nearly the same as those of the "professional" occupation: $4,100 and $4,250, respectively

26 Thomas, *The Salvage*, p 600.

27 Thomas, *The Salvage*, p 611

28 Thomas, *The Salvage*, p. 42

29. Gene N. Levine and Darrel M. Montero, "Socioeconomic Mobility Among Three Generations of Japanese Americans," *Journal of Social Issues* 29, 2 (1973), 33-48. This study was based on a sample drawn from lists of Japanese-American organizations in 1964-1966 to obtain about 900 surviving first-generation Japanese-Americans who lived in the continental United States I do not know how well this sample represents the entire second-generation Japanese-American population, so I have not used it for deriving general statistics

Occupational Segregation and the Earnings Gap
Further Evidence

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Though the earnings gap between women and men has been narrowing in recent years, it remains substantial. Hence it is not surprising to find that there is continued concern about the inability of even the most meticulous studies using differences in a large number of productivity-related characteristics of workers to explain more than half of the differential. It has, however, also been found that adding detailed occupational categories succeeds in accounting for a substantially larger share (Treiman and Hartmann 1981). Since a good deal of occupational segregation remains even within these categories (Blau and Ferber 1987), it may be assumed that there would be a further reduction if an even finer breakdown were used. On this basis, some argue that most of the male-female earnings gap could be explained without introducing discrimination.

The problem with this line of reasoning is the tacit assumption that people's occupations and the differences in earnings between occupations are not themselves tainted by discrimination. The question remains controversial. A number of researchers (Mincer and Polachek 1974; Zellner 1975; Landes 1977; Polachek 1979, 1981) focus on women's "household responsibilities" as the chief explanation for lower earnings in female occupations. Women expect only intermittent labor force participation. Hence they will opt for jobs requiring less investment in human capital and not subject to as much depreciation of skills during periods of absence. Similarly, employers will be less inclined to hire women for jobs that involve a great deal of investment in their training. As a result, women will be concentrated in occupations with flat earnings profiles, relatively high early on, but rising little at later stages. It has also been argued that women expend less energy on their market work, simply because they put more effort into housework even when they are employed full time (Becker 1985).

Little empirical support has been found for either of these hypotheses. Some of the implications with respect to intermittent labor force participation have been successfully challenged, especially by England (1982, 1984), and Bielby and Bielby (1988) have actually provided evidence (albeit based on self-reporting) that women put more effort into their paid work than do men. The possibility that discrimination may play a part in reducing wages in predominantly female occupations can therefore not be ignored.[1]

Some earlier work supports this view by showing that there is a negative correlation between earnings of both men and women and the proportion of workers in an occupation who are female (Stevenson 1975; Ferber and Lowry 1976; Jusenius 1980; Treiman and Hartmann 1981; England, Chassie and McCormack 1982). These studies, however, though they take into account one or more of such variables as education, skill demands, and age, lack information on such crucial factors as general and job-specific experience of individuals, hours and weeks worked, and size of firm, not to mention the level of authority attained by each worker. Critics argue that the omission of these and other possibly relevant variables is likely to vitiate these estimates. This issue deserves attention. It is addressed in this paper, utilizing a unique data set that includes a great deal of detailed information about the human capital individual workers have accumulated, about various aspects of the job, including the extent to which it involves control over resources, and about a number of characteristics of the employer, including size as well as type of industry.

Building on earlier work (Ferber and Spaeth 1984; Ferber, Green, and Spaeth 1986), this paper begins by determining which of the attributes of workers, jobs, and employers have a significant effect on earnings, then goes on to investigate whether women have the same opportunity for attaining valuable control over money and supervisory authority as do men with comparable qualifications. Last, we examine whether even after all these factors are accounted for, and the chance that omitted variables would bias the results has been considerably reduced, the proportion of women in an occupation nonetheless remains significant. A recent study concluded "that men experience no loss in autonomy and decisionmaking authority as the female sex composition increases while females suffer substantially by virtue of holding female-dominated occupations" (Jaffee 1989, p. 387). To the extent such effects exist, we conclude they constitute another aspect of discrimination.

Because the sample employed in this study has a disproportionate representation of individuals in managerial positions, we have extensive information on at least a small number of a "rare population," namely women in "top management." We take advantage of this to also briefly examine how this group fares, though the sample size precludes going much beyond raising questions for further exploration.

Data

The data set used in Ferber and Spaeth (1984) and in Ferber, Green, and Spaeth (1986) was collected in 1982 as part of a practicum in survey research methods by carefully trained and supervised students. A more thorough description of the data collection and construction of variables in provided in Spaeth (1985).

Telephone interviews were conducted with 245 women and 312 men living in the State of Illinois in Spring 1982 who were employed at least 20 hours a week on a single job. The numbers for Chicago were obtained by random digit dialing, because unlisted numbers are very common in that city. Systematic sampling from directories was used for the rest of the state, where nonlisting is infrequent (Sudman 1976). In order to increase the number of female respondents, interviewers were instructed to ask for a woman first, and to interview another eligible respondent only if no such woman was available. The N for this sample was 557.

Indicators designed to measure six dimensions of "work authority" were collected. They are (a) control over monetary resources, (b) supervisory authority, (c) subordinate's discretion, (d) respondent's discretion, (e) control over organizational structure, and (f) control over information. Of these, only the first two are found to add to the explanatory power of the earnings regression.

The index for control over monetary resources is based on answers to the following three questions: (1) About how much money was involved in the largest monetary decision in which you participated last year? (2) What was the largest monetary decision in which you had the final say? (3) How much money can you ordinarily spend without getting authorization from higher up? The first step toward producing a single number was to standardize the mean and standard deviations of the answers to the first and third question to the second one. If they answered questions (1) and (2), these were averaged. If they answered question (1) but not (2), that was used. If neither (1) nor (2) were answered, the response to question (3) was used. At each stage of this procedure the correlations with earnings were compared with the original correlation, and they did not change. Supervisory authority is simply equal to the answer to the question, "how many people are responsible to you both directly and indirectly?"

More recently, a "multiplicity" sample, based on the original sample, has been added. It was designed so as to achieve a disproportionate representation of workers in high-level positions who have achieved a good deal of the control over resources emphasized in this study. The approach was to attempt to interview the supervisor of every person in the original sample who had one, then interview the supervisor of that person, and so on until the topmost organizational level was reached.[2] Each respondent was then asked how many persons could have nominated him or her. This number represents that person's "multiplicity," which is proportional to the probability that the nominee will fall into the sample. The resulting total sample (of the two together) consists of 1,313 men and 404 women. Fifty-nine percent of these are managers and executives; among them are 360 men and 39 women who identify themselves as being members of "top management." The actual sample sizes for the regressions are somewhat smaller because not all the variables are available for all individuals.

Two earlier studies (Ferber and Spaeth 1984; Ferber, Green, and Spaeth 1986) utilizing only the first sample, examined the effect of the wide variety of variables collected on earnings. Because we found one of these, control over financial resources, to be highly significant, we also investigated what differences there might be in the extent to which different variables influenced the attainment of such control. The results showed that women did not attain as much financial authority as men with the same characteristics. These findings are consistent with the results of other research that showed unequal access to training and jobs such as Cabral, Ferber, and Green (1979), Duncan and Hoffman (1979), Halaby (1979), and Olson and Becker (1983).

The random sample of workers used in earlier studies was not, however, ideally suited to an investigation of the role of workers' control over resources, because so few women had any such authority. The present research is based on the larger sample which includes a disproportionate number of high-level employees, better suited for an investigation that specifically focuses on the contribution control over resources makes to the earnings of women and men, and on the question whether the sex composition of occupations influences earnings not only directly, but also indirectly via differences in the attainment both of control over money and supervisory authority. The extent to which this is the case, when so many different attributes of workers and of jobs are accounted for, would suggest that sex bias helps to explain lower wages in women's occupations.

Analysis

Table 1 presents an overall view of selected variables for "male" vs. "female" occupations. To generate this table we separated the 3-digit Census occupations into those with more than 40 percent women, and those with 40 percent or fewer women using 2-digit categories from the 1980 Census. This division was chosen in part because it approximates the proportion of the total labor force that is female, and also because it enabled us to obtain a reasonable representation in each group, as seen in table 1. Nonetheless, such a division is somewhat arbitrary; for further analysis we use the percent female in individual occupations.

The table shows that the means for many of the variables differ not only as between men and women, but also among individual men and women depending on whether they are in primarily male or primarily female occupations.[3] These differences, including the substantially greater supervisory authority and control over money men have, help to account for the higher earnings of men as compared to women, and of workers in predominantly male as compared to predominantly female occupations, without invoking discrimination. But they do not explain the whole earnings gap. Table 2 shows regressions with earnings of men and women as the dependent variable, and the percent of women in each occupation as an independent variable included in addition to all the ones used in the earlier studies. They are comprised of the standard measures of education and experience, plus weeks and hours worked, and a dummy for marital status, variables generally relied on in human capital explanations of earnings. To these were added "core industry"[4] and number of employees of the organization, to control for type of employer, and finally whether the worker had a supervisor, and two indices of control over resources, both of which were found to influence earnings.

With all these variables, we go well beyond the standard regressions current in the literature in taking account of characteristics of workers and jobs that would help to explain the earnings gap between women and men. Therefore, finding that the proportion of workers in an occupation who are women nonetheless has a significant effect on earnings may be seen as strongly suggesting discrimination. Not only do we find this to be the case, but the effect is quite substantial. For instance, given the mean proportion of women in the female and male occupations in our sample, the difference in this variable represents a difference of 15 percent in earnings. Thus it is clear that the gender composition of occupations itself plays an important role as a determinant of earnings.

Table 1
Means of Selected Variables for Men and Women in Male and Female Occupations

	Occupations with more than 40 percent women		Occupations with 40 percent or fewer women	
	Men (99)	Women (188)	Men (957)	Women (116)
Years of education	15.37	13.81	15.34	14.56
Years of experience before current employer	4.46	5.40	6.30	5.60
Years in previous job with current employer	6.15	2.16	9.95	5.83
Years in current job	7.50	5.89	6.26	5.34
Weeks worked	48.27	45.92	49.93	48.28
Hours worked	47.57	39.50	51.60	45.59
Proportion married	0.76	0.51	0.88	0.57
Core industry	0.85	0.84	0.82	0.72
ln number of employees of organization	7.85	5.92	7.65	7.19
No supervisor	0.02	0.01	0.03	0.05
Sex of supervisor, M=1, F=0	0.86	0.57	0.95	0.74
Supervisory authority	60.40	44.14	73.46	65.10
Control over money	55.92	37.73	66.82	47.39
Percent women in occupation	53.56	74.25	22.74	26.67
Annual earnings	$39,899	$17,884	$67,335	$31,416

Table 2
Determinants of ln Earnings of Men and Women
(standard errors in parentheses)

	Men (1,056)	Women (304)
Years of education	0.072***	0.046***
	(.007)	(.013)
Years of experience before current employer	0.029***	0.020***
	(.005)	(.009)
Years of experience before current employer, squared	-0.0004***	-0.001**
	(00016)	(.0003)
Years in previous job with current employer	0.026***	0.032***
	(.0046)	(.013)
Years in previous job with current employer, squared	-0.0002*	-0.001*
	(.00014)	(.0005)
Years in current job	0.016***	0.019***
	(.002)	(.004)
Weeks worked	0.006***	0.010***
	(.0019)	(.003)
Hours worked	0.008***	0.008**
	(0016)	(.0035)
Married	0.093***	-0.081
	(.045)	(.057)
Core industry	-0 023	0.046
	(.037)	(.072)
ln number of employees of organization	0.031***	0.046***
	(.006)	(.011)
No supervisor	0.254***	0.287
	(.106)	(.201)
Sex of supervisor, M=1, F=0	0.074	0.147***
	(.063)	(062)
Supervisory authority	0.007***	0.006***
	(0008)	(.002)
Control over money	0.004***	0 007***
	(.0004)	(002)
Percent women in occupation	-0.003***	-0.003**
	(.0011)	(.0012)
Constant	0 600***	0 356
	(157)	(.250)
Adjusted R^2	0.600	0 607

*Significant at the 10 level
**Significant at the 05 level
***Significant at the 01 level

With all these variables, we go well beyond the standard regressions current in the literature in taking account of characteristics of workers and jobs that would help to explain the earnings gap between women and men. Therefore, finding that the proportion of workers in an occupation who are women nonetheless has a significant effect on earnings may be seen as strongly suggesting discrimination. Not only do we find this to be the case, but the effect is quite substantial. For instance, given the mean proportion of women in the female and male occupations in our sample, the difference in this variable represents a difference of 15 percent in earnings. Thus it is clear that the gender composition of occupations itself plays an important role as a determinant of earnings.

Another variable in this regression also deserves attention. Having a male supervisor has a significant positive effect on the earnings of women. The coefficient is positive for the earnings of men as well, though it is not significant.[5] Because there is a widespread belief that both women and men tend to prefer male supervisors, this might be interpreted to show that workers perform more efficiently when their boss is a man. However, a study which investigated how employees actually rated their supervisors—as opposed to merely expressing an abstract preference for men or women—found that female bosses received higher ratings (Ferber, Huber, and Spitze 1979). Therefore we are more inclined toward the view that there may be a tendency to devalue women's work more when even the supervisor is a woman,[6] and perhaps at times sex of the supervisor may be a proxy for the sex-type of job (a category considerably more detailed than occupation).

The regression for earnings does not, however, tell the whole story. So far we have taken supervisory authority and control over money as given. Similar to Jaffee (1989), the results of Tobit regressions in tables 3 and 4 show that a higher percent female has a significant negative effect on attainment of supervisory authority and control over money by women.[7] On the other hand, the coefficient for this variable is positive for both the regressions for men and significant for attainment of supervisory authority. Thus men appear to have an advantage as compared to women, at least in attaining supervisory authority as the occupation they are in becomes increasingly female, but women are at a disadvantage in attaining both types of authority.

It may be that in women's occupations, supervisory authority is more often over persons in the same occupation, such as a nurse supervising other nurses, or a social worker supervising other social workers, as opposed to being in charge of persons in another occupation, such as a manager supervising a secretary. This would be expected to reduce the opportunity for attaining such authority, as is apparently the case for women. For men, however, this is likely to be offset by their heavy concentration at higher levels of the hierarchy as the proportion of women in occupations rises. This possibility has also been suggested in OECD (1985). Perhaps the more traditional women who tend to enter the traditionally female fields are less willing to compete for these jobs, and possibly are less willing to accept other women in a supervisory role. Frequently, women in these occupations also believe that having a male supervisor is likely to raise their status—a view which receives some support from our research. It should be noted this does not imply that men constitute a larger proportion of supervisors in female than in male occupations, but only that a disproportionate share of the few men in female occupations are likely to be in such positions.

Overall, our findings show that the proportion of workers who are women influences earnings both directly and, to some extent indirectly, even when a large number of other factors are accounted for. They are consistent both with the "overcrowding" model (Bergmann 1974) and with the proposition that women are hired in fields abandoned by men when they can get higher pay elsewhere (Reskin and Roos, 1990; Strober and Arnold 1984), as well as various other segmented labor market theories (reviewed in Cain 1976). Discrimination is an integral part, implicitly or explicitly, of each of these hypotheses. Hence to the extent that they are applicable, they support our conclusion that occupations themselves are tainted as an explanation of the earnings gap.

This study does not itself answer, or even address the question why so many women continue to enter occupations where rewards are lower, perhaps because of "overcrowding." Traditional attitudes, social pressures, discrimination in education, training, and hiring have all been suggested as possible contributing factors. The recent influx of women into male occupations may be regarded as evidence that as some of these

Table 3
Determinants of Supervisory Authority of Men and Women
Tobit Analysis (standard errors in parentheses)

	Men (1,083)	Women (317)
Years of education	3.442***	3.663***
	(0.290)	(0.179)
Years of experience before current employer	0.905***	1.643***
	(0.202)	(0.560)
Years of experience before current employer, squared	-0.016***	-0.049**
	(0.007)	(0.023)
Years in previous job with current employer	1.343***	2.386***
	(0.199)	(0.679)
Years in previous job with current employer, squared	-0.022***	-0.058**
	(0.006)	(0.028)
Years in current job	-.055	0.212
	(0.099)	(0.235)
Weeks worked	0.209***	0.485***
	(0.084)	(0.171)
Hours worked	0.797***	0.862***
	(0.066)	(0.194)
Married	6.836***	7.400**
	(1.983)	(3.249)
Core industry	-3.079*	5.382
	(1.621)	(4.171)
ln number of employees of organization	0.296	-0.282
	(0.262)	(0.634)
No supervisor	2.667	6.946
	(4.569)	(11.149)
Sex of supervisor, M=1, F=0	0.605	0.654
	(2.756)	(3.617)
Percent women in occupation	0.160***	-0.397***
	(0.049)	(0.066)
Constant	-55.421***	-63.755***
	(6.859)	(15.213)
-2 x log likelihood	8,673	1,968

*Significant at the .10 level.
**Significant at the .05 level
***Significant at the 01 level.

Table 4
Determinants of Control Over Money
Tobit Analysis (standard errors in parentheses)

	Men (1,195)	Women (355)
Years of education	7.642***	5.224***
	(0.662)	(0.762)
Years of experience before current employer	1.372***	2.317***
	(0.440)	(0.657)
Years of experience before current employer, squared	-0.009	-0.079***
	(0.015)	(0.029)
Years in previous job with current employer	2.087***	1.360**
	(0.428)	(0.693)
Years in previous job with current employer, squared	-0.027**	-0.036*
	(0.013)	(0.027)
Years in current job	0.403**	0.461**
	(0.220)	(0.240)
Weeks worked	-0.015	-0 091
	(0.183)	(0.168)
Hours worked	1 134***	0.906***
	(0.139)	(0.196)
Married	6.472*	5.635*
	(4.448)	(3.446)
Core industry	-0.517	-4.998
	(3.474)	(4.140)
ln number of employees of organization	2 185**	-0.525
	(0.561)	(0.635)
No supervisor	23.148***	15.410*
	(9.557)	(10.318)
Sex of supervisor, M=1, F=0	7.375	6.003*
	(5.862)	(3.874)
Percent women in occupation	0 163	-0.157**
	(0 114)	(0.068)
Constant	-175 742***	-83.410***
	(15.737)	(16.330)
-2 x log likelihood	10,138	1,852

*Significant at the 10 level
**Significant at the 05 level
***Significant at the 01 level

barriers have been crumbling, so is women's willingness to take poorly paid jobs declining. As yet, however, there is no agreement on the answer.

Women in A Male Domain

The analysis up to this point shows that women will tend to do better as their proportion in an occupation declines. An interesting question is whether this will hold in an environment that is entirely dominated by members of the opposite sex. This issue is particularly important because so many of the most prestigious, and all the most highly paid occupations have been, and to a considerable extent continue to be, male preserves.

Empirical evidence on this subject is rather scarce, since clearly the number of women in such situations tends to be extremely small. Because of the way our sample was chosen, we have a somewhat larger than usual representation in a particularly interesting occupational category, namely "top management."[8] It is still too small to rely on for an authoritative interpretation, but the results of our analysis are suggestive.

Members of this group are clearly an elite in terms of their characteristics and their rewards, as can be seen in table 5. These data are consistent with the findings of Diploy (1987) that the traits of managerial women differ markedly from those of the "typical" female: they score higher on measures of masculine personality traits than do women in traditionally female occupations. Table 5 also shows that the differences between the characteristics of men and women in this group are, for the most part, not as great as among other workers. Accordingly, it is not surprising that there is also less of a differential in earnings. Women's earnings are 54 percent of those of men among top managers, as compared to 42 percent among other workers.

Turning next to the earnings regressions, the small sample size may explain why for women only two coefficients are statistically significant at the 10 percent level or better[9] despite an adjusted R^2 of .76, considerably higher than for the other regressions. Nonetheless, the fact

Table 5
Means of Selected Variables for Men and Women In "Top Management" and Among Other Workers

Variables	Top management		Other workers	
	Men (N=360)	Women (N=28)	Men (N=696)	Women (N=276)
Age	49.63	48.54	43.92	39.64
Years of experience before current employer	7.54	7.73	5.84	5.56
Years of previous experience with current employer	11.48	5.42	8.65	2.84
Years in current job	6.09	6.87	7.04	5.76
Hours per week worked	55.34	50.89	48.83	40.80
Weeks per year worked	50.49	49.79	49.33	46.44
Years of education	16.19	15.33	14.76	13.85
Index of control over money	85.74	67.68	52.85	38.25
Index of supervisory authority	85.75	82.28	63.81	46.93
Proportion married	.93	.67	.84	.56
Annual earnings	$97,994	$53,146	$47,575	$19,936

Table 6
Determinants of ln Earnings of Women and Men

Variables	Top management: Men (N=360)	Top management: Women (N=28)	Other workers: Men (N=696)	Other workers: Women (N=276)
Years of education	0.0363**	-0.0145	0.0686***	0.0384***
Years of experience before current employer	0.0201**	0.0049	0.0257***	0.0175**
Years of experience before current employer, squared	0.0000	-0.0003	-0.0004***	-0.0005*
Years with current employer, previous job	0.0334***	0.0121	0.0182***	0.0356***
Years with current employer, previous job, squared	-0.0005*	0.0005	-0.0001	-0.0009**
Years in current job	0.0180***	-0.0026	0.0134***	0.0204***
Weeks worked	0.0070*	-0.0043	0.0050***	0.0101***
Hours worked	0.0005	-0.0225	0.0118***	0.0092***
Married	-0.0168	-0.1426	0.1366***	-0.0885
Core industry	-0.0520	-0.0482	0.0183	0.0537
ln number of employees of organization	0.0544***	0.1921**	0.0354***	0.0486***
Control over monetary resources	0.0038***	0.0049	0.0030***	0.0075***
Supervisory authority	0.0032*	0.0047	0.0052***	0.0064***
No supervisor	0.1128	-0.1147	0.6091***	0.2018
Sex of supervisor (male=1)	0.0177	-0.2640	0.1222*	0.1778***
Constant	1.8925***	4.1569***	0.4568***	0.1402
Adjusted R^2	0.4055	0.7560	0.5868	0.5474

*Significant at .10 level
**Significant at .05 level
***Significant at .01 level

that the coefficients in the women's regression for education, years of experience before current employer, years of previous experience with current employer, years in current job, weeks worked, hours worked, and "no supervisor," are either very much smaller (and in some cases even have a negative sign) than in the men's regression, deserves attention. Combined with a very much larger constant for women than men in the case of top managers, while the opposite is true for other workers, these data point to the conclusion that the reward structure represented by the two regressions really is quite different. These results differ from such earlier ones as Corcoran and Duncan (1979), but are consistent with the views of Doeringer and Piore (1971) and Bridges and Berk (1978), for instance, that it is not the characteristics of the individual but the job that tend to determine earnings.

The extent of the difference in reward structures of women and men is suggested by the fact that men in top management who actually earn $97,992 on average, would earn only $72,079 if they were rewarded as women are, and that women who actually earn $53,147 would earn $74,280 if they were rewarded as men are.[10]

One interpretation, consistent with Kanter's (1977) hypothesis, is that members of this extremely small minority tend to be treated not as individuals, but as "tokens." What the majority notices about them is not the particular characteristics that differentiate one from another, but rather that they all belong to a group of outsiders.[11] This would account for the fact that human capital differences have virtually no effect on their earnings.[12] Whether or not one accepts this interpretation, the case of top executives reinforces doubts about unmeasured characteristics as the sole explanation of earnings differences and confirms that some form of discrimination is likely to be the explanation for at least part of the earnings gap.[13]

Conclusions

In this study we investigated the effects of the proportion of persons in an occupation who are women on the earnings of workers. In regressions including not only the standard human capital and employer variables, but also the extent to which individuals have achieved control over human and financial resources, we found that this factor nonetheless had a significant negative impact. Furthermore, women, though not men, also achieved less supervisory authority as the percent of women in the occupation increased, which in turn further reduced their earnings. Thus there appear to be penalties for being in female occupations beyond those that are warranted by existing differences in human capital or in the job characteristics accounted for in this research. We conclude that these results create at least a presumption that the existence of discrimination cannot be explained away by introducing occupations as an explanatory variable.

We also examined the qualifications and rewards of men and women in a very prominent, prestigious occupation with a very small minority of women. These highly qualified women are not only paid substantially less than their male counterparts, but they are, for the most part, all paid about the same, regardless of their individual characteristics. As noted before, the sample is too small to warrant firm conclusions. But it may be that women who expect to avoid the disadvantages of female occupations by going to the opposite extreme, also encounter problems.

NOTES

1. It is often argued that discriminatory wage differentials could not persist in competitive labor markets Recent work by Krueger and Summers (1986, 1988) on interindustry wage differentials, which led them to reject classical competitive theories of wage determination because they found persistent differences in wages for equally skilled workers, helps to undermine this contention

2. Evidence for the success of this design is provided by the fact that among the respondents are a number of heads of large corporations and the Governor of the State of Illinois.

3 The descriptive data are shown to provide additional information about characteristics of this sample, which is clearly not representative of the population, because high-level workers are overrepresented.

4. The definition of "core" and "peripheral" industries is taken from Hodson (1983) It is based on a factor analysis of a large number of characteristics, which initially results in 16 separate classifications, but is further reduced to 6 For our purposes, we reduced this to the two categories of "core" and "periphery " Averitt (1968) defines core firms as those that are powerful enough to protect themselves from the vagaries of local and single-product markets by selling a variety of products in national and international markets, while periphery firms tend to be small and local and produce a limited product line

5. As we shall see later in table 4, the same is true for attainment of control over money

6. We also ran the same regressions, without percent female, separately for men and women in occupations with more than 40 percent women and in occupations with 40 percent or fewer women, to determine whether any consistent patterns could be found Contrary to what might be expected, being married had a significant negative effect in male but not in female occuaptions Consistent with usual beliefs that experience is more important in male occupations, years of work before current employer and in previous jobs with current employer have a greater effect on earnings for both men and women in male occupations On the other hand, this is not true of years in current jobs, nor of level of education attained

7. Tobit analysis was used for these dependent variables because there were many individuals with no supervisory authority or control over money Chow tests on the regressions in table 2 and on OLS versions of the Tobit runs showed the male and female equations to be significantly different at the 1-percent level.

8. Respondents were placed in this category if their responses were positive to the following questions. (1) Would you say you are in a management position? and (2) Would you say you are top management? Obviously such people include high-level managers in small organizations, not only CEOs in Fortune 500 companies or chief executives of large state agencies

9. Moreover, it is size of the organization where the woman is employed, not one of her own characteristics, that has the most significant effect on earnings This may be because laws are more likely to be enforced in large firms, as is for instance suggested by Leonard (1987).

10. It is also interesting that men in top management would earn substantially more, $78,446, if they were rewarded as are men not in top management, than if they were rewarded as are women in top management. To obtain the coefficients necessary to calculate these dollar figures, we reran the regressions shown in table 6 using actual earnings, rather than "ln earnings" as the dependent variable

11 Bartlett and Miller's (1985) finding that there is no evidence of a statistically significant relationship between leaves of absence and earnings for women executives points toward the same conclusion Whether an individual woman does or does not take leaves appears to make little difference as compared to the perception that women tend to take leaves more than men

12 The fact that the standard deviation of earnings of these top management women, who resemble their male peers far more than other women workers do, nonetheless is just as much lower as compared to the standard deviation of earnings of men, further supports this conclusion

	Mean Earnings	**Standard Deviation**
Non-top management men	$47,575	$(42,718)
Non-top management women	19,936	(13,236)
Top management men	97,994	(82,130)
Top management women	53,146	(39,038)

13. Given the small sample size and the attendant uncertainty about the significance of the differences in the regressions for male and female top managers, we also examined a combined regression, with sex as a dummy variable As would be expected in view of their representation in the sample, the results are similar to those for men only The R^2 is, however, higher. 450 rather than .406, and sex is significant at the 1-percent level, suggesting, once again, that rewards for women are not the same as for men.

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